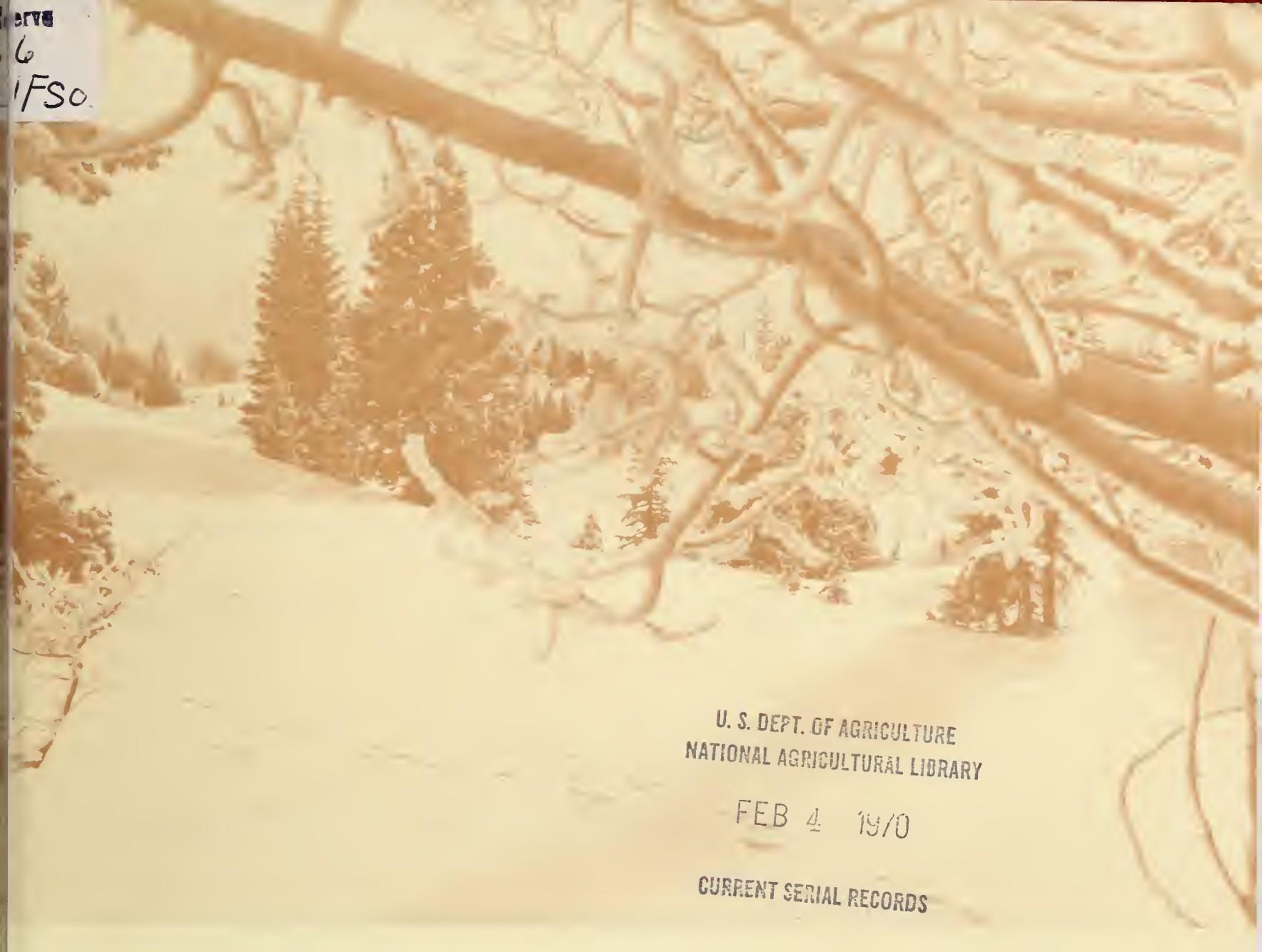


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FEB 4 1970

CURRENT SERIAL RECORDS

# WATER SUPPLY OUTLOOK FOR OREGON

and

FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

UNITED STATES DEPARTMENT of AGRICULTURE...SOIL CONSERVATION SERVICE

and

OREGON STATE UNIVERSITY

and

STATE ENGINEER of OREGON

Data included in this report were obtained by the agencies named above  
in cooperation with other Federal, State and private organizations.

AS OF  
JAN. 1, 1970

## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1400 snow courses in Western United States and in the Columbia Basin in British Columbia. In the near future, it is anticipated that automatic snow water equivalent sensing devices along with radio telemetry will provide a continuous record of snow water equivalent at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

## PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	P. O. Box "F", Palmer, Alaska 99645
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	12417 Federal Building, Denver, Colorado 80202
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 98, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Building, Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 340, Casper, Wyoming 82601

## PUBLISHED BY OTHER AGENCIES.

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P O Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



235913

# **WATER SUPPLY OUTLOOK FOR OREGON**

and  
**FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS**

*Issued*

**JANUARY 8, 1970**

*Issued by*

**KENNETH E. GRANT**  
ADMINISTRATOR  
SOIL CONSERVATION SERVICE  
WASHINGTON, D.C.



*Released by*

**A.J. WEBBER**  
STATE CONSERVATIONIST  
SOIL CONSERVATION SERVICE  
PORTLAND, OREGON

*In Cooperation with*

**G. BURTON WOOD**  
DIRECTOR  
OREGON AGRICULTURAL  
EXPERIMENT STATION

**CHRIS L. WHEELER**  
STATE ENGINEER  
STATE OF OREGON



*Report prepared by*

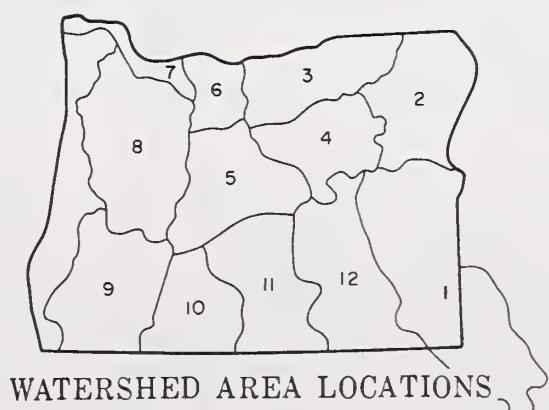
**TOMMY A. GEORGE**, Snow Survey Supervisor  
and

**HOWARD M. VANCE**, Assistant Snow Survey Supervisor  
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PORTLAND, OREGON 97205



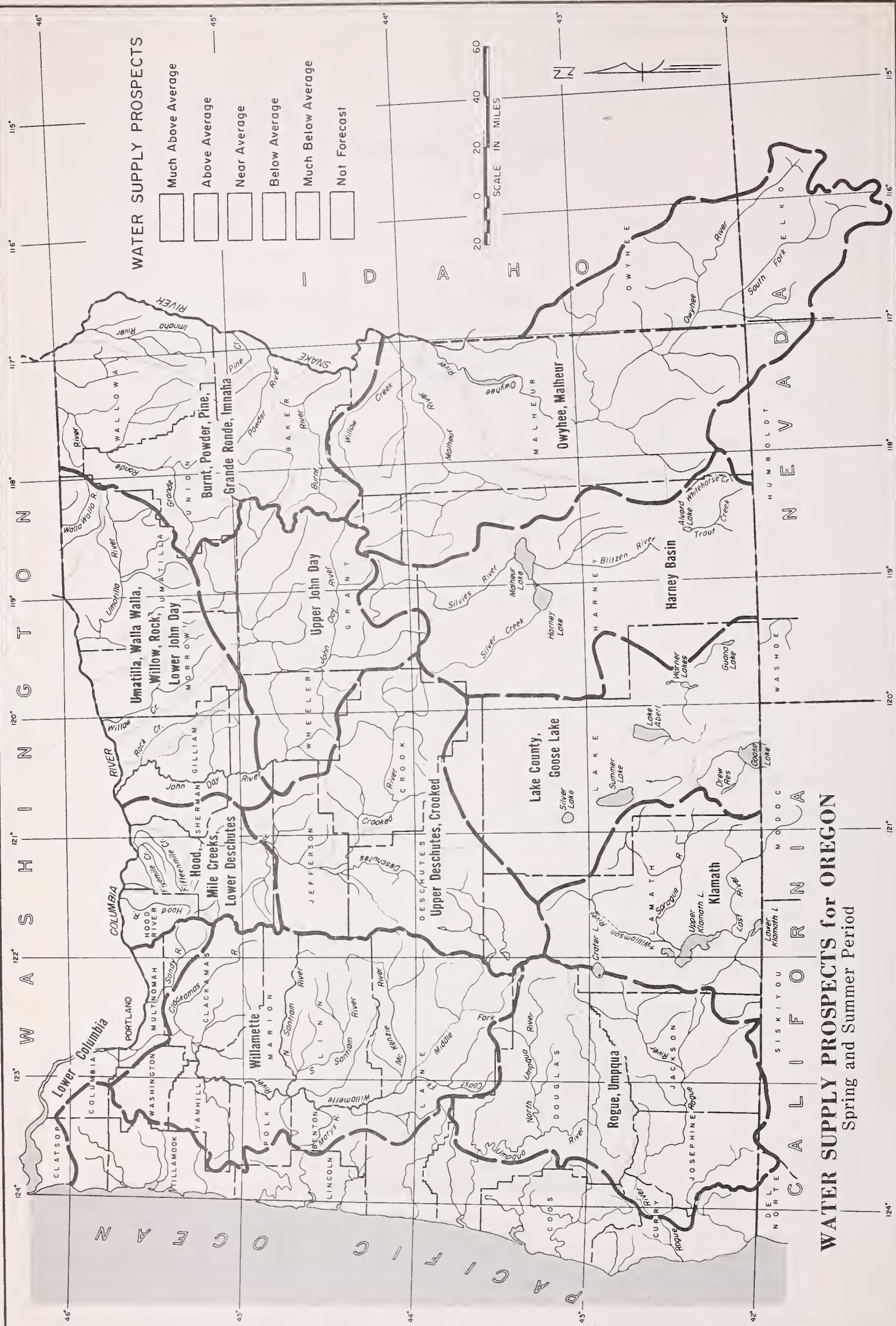
## TABLE OF CONTENTS

	PAGE
WATER SUPPLY PROSPECTS FOR OREGON.....(MAP).....	FACING PAGE 1
WATER SUPPLY OUTLOOK FOR OREGON.....	1
DETAILED WATER SUPPLY OUTLOOK BY MAJOR WATERSHED AREAS	
OWYHEE, MALHEUR.....	AREA 1
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA.....	AREA 2
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY.....	AREA 3
UPPER JOHN DAY.....	AREA 4
UPPER DESCHUTES, CROOKED.....	AREA 5
HOOD, MILE CREEKS, LOWER DESCHUTES.....	AREA 6
LOWER COLUMBIA.....	AREA 7
WILLAMETTE.....	AREA 8
ROGUE, UMPQUA.....	AREA 9
KLAMATH.....	AREA 10
LAKE COUNTY, GOOSE LAKE.....	AREA 11
HARNEY BASIN.....	AREA 12
BASIC DATA SUPPLEMENTS	
I	SNOW
II	SOIL MOISTURE
III	PRECIPITATION
IV	AUTOMATIC STATION DATA
MAP AND INDEX OF OREGON SNOW COURSES.....(MAP)	
LIST OF COOPERATORS.....	INSIDE BACK COVER



WATER SUPPLY PROSPECTS

Much Above Average	<input type="checkbox"/>
Above Average	<input type="checkbox"/>
Near Average	<input type="checkbox"/>
Below Average	<input type="checkbox"/>
Much Below Average	<input type="checkbox"/>
Not Forecast	<input type="checkbox"/>



# WATER SUPPLY OUTLOOK for OREGON

JANUARY 1, 1970

Generally Oregon's water supplies next summer will be above average and average in the southeast part of the State and the northern Cascades. Below average prospects are seen for the central and southern Cascades, central Oregon and in the northeast corner of the State. Stored water supplies are good and will see many irrigators through the summer season. Snowpacks increased considerably the last two weeks of December and now range from 60 per cent of normal to above average.

## SNOW COVER

Snow ranges from 120 per cent of average in Malheur County down to 60 per cent in Klamath and Lake Counties. Snow cover is near 80 per cent of average in the Rogue, Umpqua, Upper Willamette and Deschutes watersheds in addition to the northeastern corner of the State. The Mt. Hood area, Harney basin, John Day River watershed and Baker County have snowpacks near average for January 1.

## SOIL MOISTURE

Soil moisture is near average except for the south central or southeastern parts of the State and should not detract much from the snowmelt runoff.

## PRECIPITATION

Precipitation during December was excellent over the whole state. Amounts received varied from 150 to 180 per cent of normal in Malheur and Lake Counties to 110 per cent in the Burnt, Grande Ronde, Willamette and Deschutes drainages.

## RESERVOIR STORAGE

Reservoir storage is better than it has been for the past several years. On January 1, 25 reservoirs were storing 1,808,000 acre feet. This is 113 per cent of average. Last year at this time they contained 1,140,000 acre feet. This improvement is due to last year's heavy snowpack and resultant excellent streamflow runoff.

continued on next page

continued--

## STREAMFLOW

Oregon's streams were flowing at near average volumes in the early fall but due to dry and windy weather in November and early December they have dropped off rapidly.

Winter runoff to date is represented by the following streams:

Stream	Oct.-Dec. Volumes as Per Cent of 1953-67 Average
Owyhee net Inflow	82
John Day at Service Creek	60
Deschutes at Moody	84
Grande Ronde at La Grande	36
Willamette, Mid. Fk. below N. Fk.	70
Umpqua near Elkton	77
Rogue at Raygold	72
Upper Klamath net Inflow	82

\*This report contains data furnished by the Oregon State Engineer, U. S. Geological Survey, U. S. Weather Bureau and other cooperators.





# WATER SUPPLY OUTLOOK OWYHEE, MALHEUR WATERSHEDS OREGON

*as of*

JANUARY 1, 1970

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**U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

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## GENERAL OUTLOOK

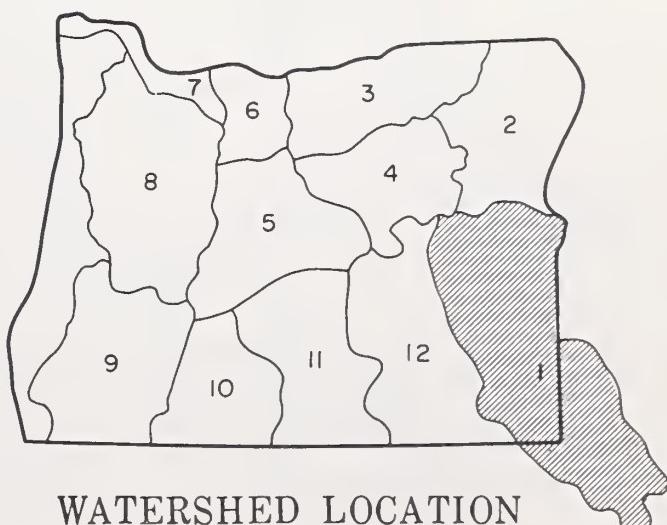
WATER SUPPLIES SHOULD BE GOOD NEXT SUMMER. MOUNTAIN SNOWPACKS ARE ABOVE NORMAL. PRECIPITATION DURING DECEMBER WAS 150%. SOILS AT THIS TIME, HOWEVER, ARE DRIER THAN THEY HAVE BEEN FOR THE PAST SEVERAL YEARS WITH MOISTURE 75% OF AVERAGE. RESERVOIRED WATER SUPPLIES ARE ABOVE AVERAGE FOR THIS TIME OF YEAR. RUNOFF INTO Owyhee Reservoir from October 1 to January 1 has been 82% of average.

## **WATER SUPPLY OUTLOOK**

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Boulder Creek		
Bully Creek		
Cow Creek		
Jordan Creek		
Jordan Valley Irrig. Dist.		
McDermitt Creek		
Owyhee Project		
Succor Creek		
Tenmile Creek		
Vale-Oregon Irrig. Dist.		
Warmsprings Irrig. Dist.		
Willow Creek (Reservoired)		

Forecasts begin in the February 1 report which will be issued about February 10, 1970.



WATERSHED LOCATION

Report prepared by

T.A. GEORGE AND H.M. VANCE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.  
PORTLAND, OREGON 97205

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural

SUMMARY of SNOW MEASUREMENTS										SOIL MOISTURE	
										(COMPARISON WITH PREVIOUS YEARS)	
										February 10, 1970.	
FORCAST POINT	LOW FLOW Value	Forecast Date of Low Flow	Stream with Recede to Low	Average Date of Low Flow	Second/Ft. Value	Low Flow Capacity	Usable Capacity	This Year	Last Year	Average Storage	FORCASTS BEGIN IN
RESERVOIR	RESERVOIR	RESERVOIR	RESERVOIR	RESERVOIR	RESERVOIR	RESERVOIR	RESERVOIR	RESERVOIR	RESERVOIR	RESERVOIR	THE FEBRUARY 1 REPORT WHICH WILL BE ISSUED ABOUT FEBRUARY 10, 1970.
Agancy Valley	60.0	13.5	9.9	17.4	4.0	330.8	30.0	6.9	-	62.0	FORCASTS BEGUN IN FEBRUARY 10, 1970.
Antelope	55.0	3.2	6.9	4.0	-	715.0	468.9	174.9	14.4	191.0	WATERSPRINGS
Bull Creek	30.0	8.0	8.9	-	-	715.0	468.9	174.9	14.4	191.0	OWYHEE
Watersprings	17.4	9.9	17.4	4.0	-	330.8	30.0	6.9	-	62.0	AGENCY VALLEY

| RIVER BASIN                         | Number of Stations | Last Year | Average 1 |
|-------------------------------------|--------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| THIS YEAR'S MOISTURE<br>RIVER BASIN | Number of Stations | Last Year | Average 1 |

SUMMARY of SNOW MEASUREMENTS

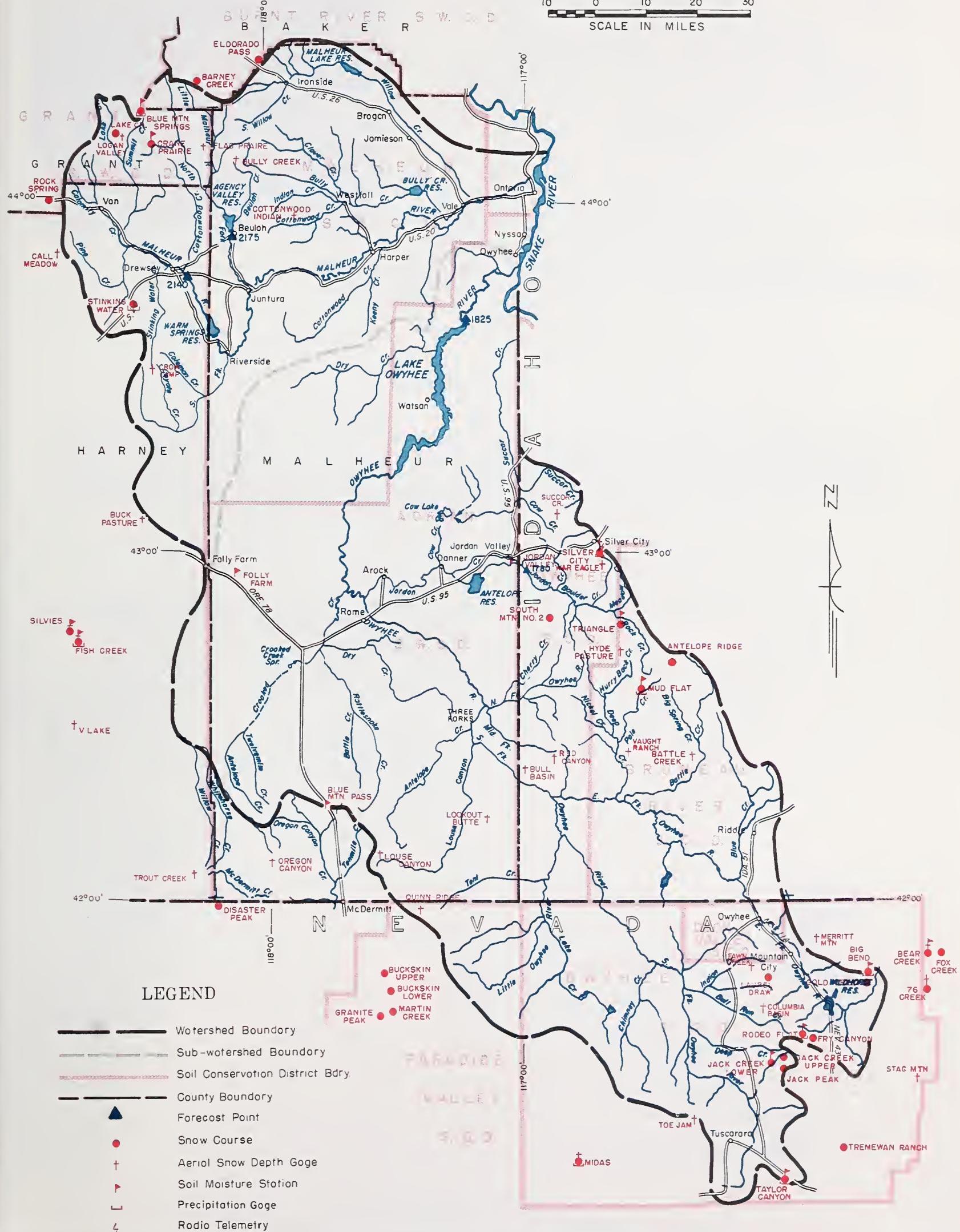
Agency Valley	Antelope	Bull Creek	Owyhee	Warmsprings
17.4	13.5	13.5	14.4	62.0
9.9	9.9	9.9	14.4	330.8
60.0	55.0	55.0	71.4	191.0
55.0	30.0	30.0	71.4	174.9
55.0	30.0	30.0	71.4	468.9
6.9	8.0	8.0	71.4	175.0
4.0	8.9	8.9	71.4	191.0
-	-	-	71.4	14.4
				330.8

RESERVOIR	Usable Storage	Capacity	This Year	Last Year	Average
-----------	----------------	----------	-----------	-----------	---------

**RESERVOIR STORAGE (thousand Ac. Ft.)**    **END OF MONTH**

# OWYHEE, MALHEUR WATERSHEDS

10 0 10 20 30  
SCALE IN MILES



## LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- - - - Soil Conservation District Bdry
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aeriel Snow Depth Goge
- Soil Moisture Station
- ◆ Precipitation Goge
- △ Radio Telemetry





Area 2

# WATER SUPPLY OUTLOOK BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS OREGON

*as of*

JANUARY 1, 1970

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**U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

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## GENERAL OUTLOOK

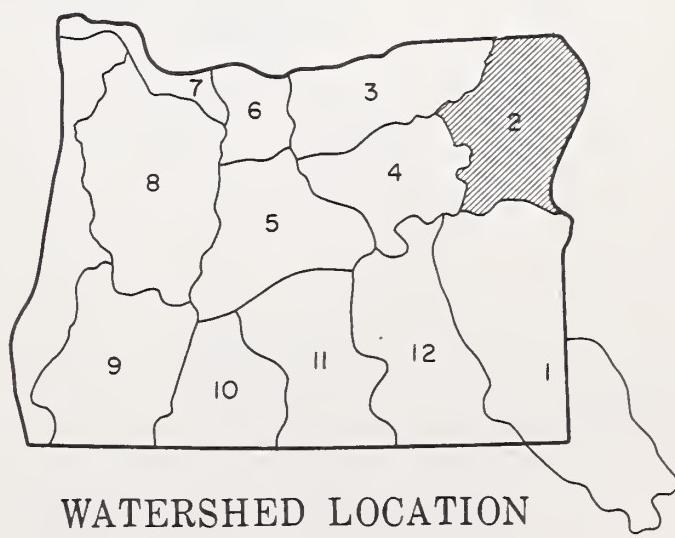
WATER SUPPLY PROSPECTS ARE GOOD ON THE POWDER AND BURNT RIVERS AND BELOW AVERAGE ELSEWHERE. THE SNOWPACK RANGES FROM 50% OF AVERAGE TO 100% OF AVERAGE. PRECIPITATION DURING DECEMBER WAS 113% OF NORMAL. MOUNTAIN SOILS ARE WETTER THAN USUAL IN THE NORTH HALF OF THE AREA AND NEAR AVERAGE MOISTURE IN THE SOUTH HALF. STORED WATER IS BELOW AVERAGE. FLOW OF THE GRANDE RONDE AT LA GRANDE WAS 40% OF NORMAL FOR THE OCTOBER TO DECEMBER PERIOD.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Alder Slope		
Baker Valley		
Big Creek		
Clover Cr. (nr. N. Powder)		
Cove		
Durkee		
Eagle Valley		
Elgin		
Enterprise-Joseph		
Hereford-Bridgeport		
Imnaha River		
La Grande-Island City		
Lostine-Wallowa		
No. Powder River-Wolf Cr.		
Pine Valley		
Powder River-Elk Creek		
Summerville		
Sumpter Valley		
Union-Hot Lake		
Unity		

Forecasts begin in  
the February 1  
report which will  
be issued about  
February 10, 1970.



WATERSHED LOCATION

## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET Last Year	Average <sup>i</sup>
Bear near Wallowa Burnt near Hereford <sup>d</sup> Catherine near Union Eagle Creek above Skull Creek Grande Ronde at La Grande Hurricane near Joseph Imnaha at Imnaha Lostine near Lostine Powder near Baker Wallowa, East Fork near Joseph <sup>d</sup>					

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>
Grande Ronde, Catherine Creek, Imnaha River Burnt, Powder	3 2	105 100	116 89

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Thief Valley	17.4	13.8		
Unity	25.2	8.0	8.6	6.5
Wallowa Lake	37.5	10.4	26.5	20.5
Phillips Lake	73.5	26.9	7.1	--

## SUMMARY of SNOW MEASUREMENTS

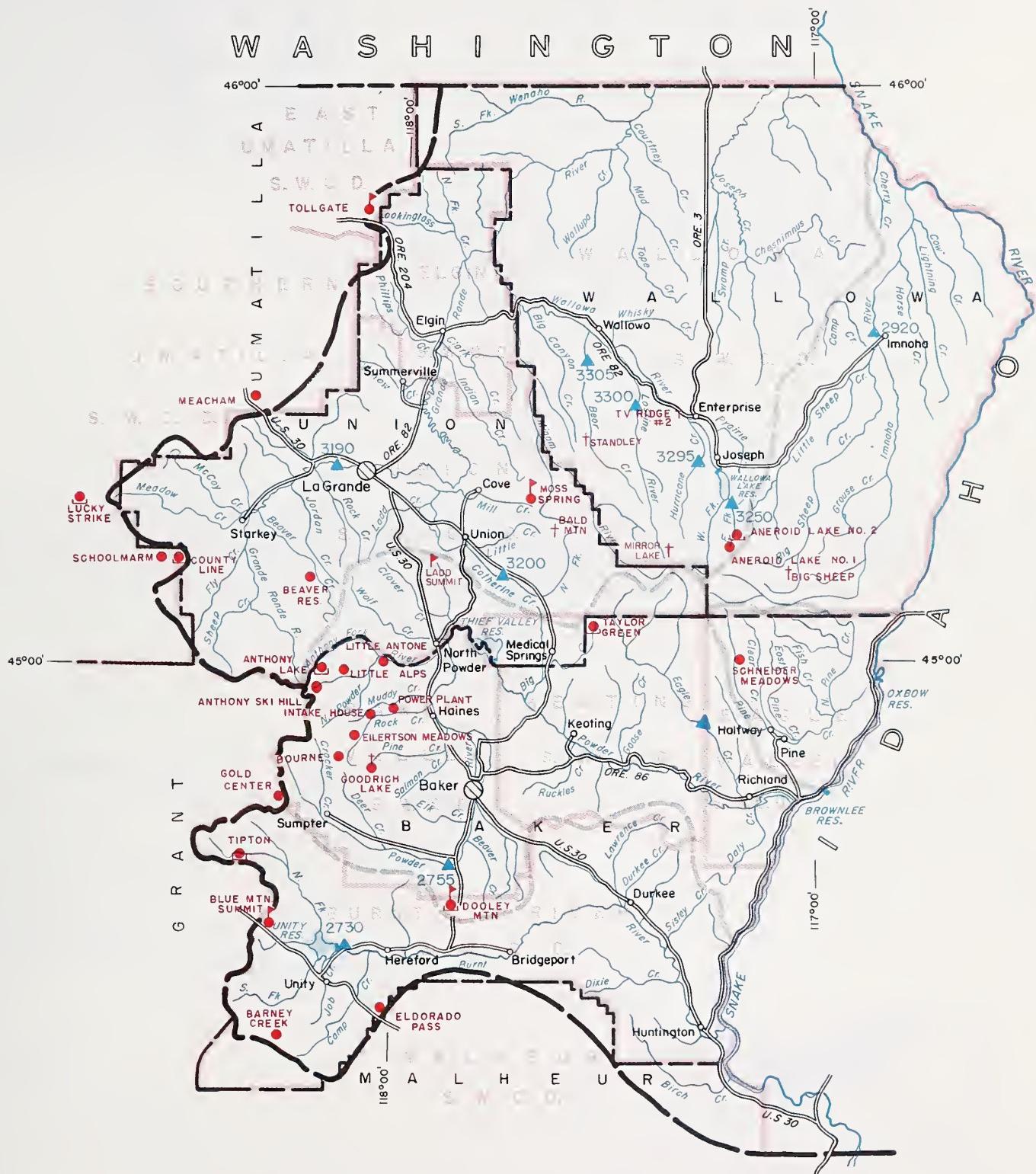
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Wallowa, Imnaha, Catherine Creek	1	63	74
Powder	3	60	87
Burnt	4	82	105

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS

10 0 10 20 30  
SCALE IN MILES



## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Boundary
- County Boundary
- ▲ Forecast Point
- Snow Course
- Soil Moisture Station
- ✚ Aerial Snow Depth Gage
- Precipitation Gage



**WATER SUPPLY OUTLOOK  
UMATILLA, WALLA  
WALLA, WILLOW, ROCK,  
LOWER JOHN DAY  
WATERSHEDS  
OREGON**

*as of*

JANUARY 1, 1970

**U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

**GENERAL OUTLOOK**

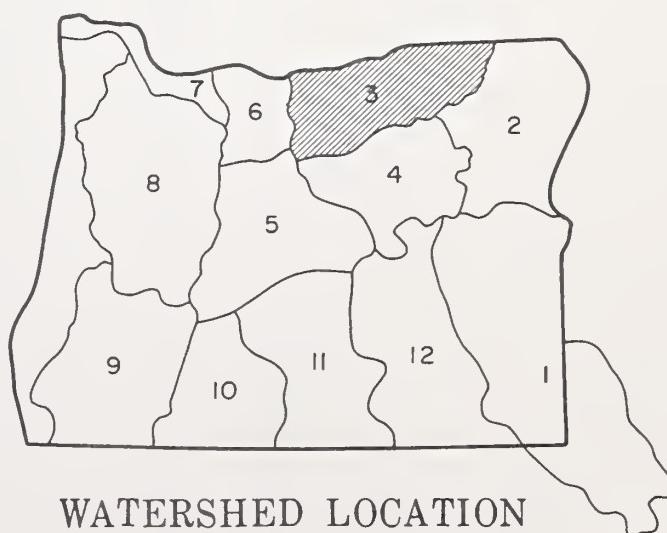
WATER SUPPLY PROSPECTS ARE NEAR AVERAGE. SNOWPACKS ARE CLOSE TO NORMAL FOR THIS TIME OF YEAR. STORMS AFTER THE SNOW MEASUREMENTS WERE TAKEN BROUGHT THE PACK TO NEAR AVERAGE. ALTHOUGH PRECIPITATION DURING DECEMBER WAS 116% OF NORMAL, SOIL MOISTURE IS NEAR AVERAGE FOR JANUARY 1. STORED WATER IS ABOVE AVERAGE IN MC KAY RESERVOIR AND BELOW AVERAGE IN COLD SPRINGS.

**WATER SUPPLY OUTLOOK**

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Walla Walla River, No. Fk.		
Walla Walla River, So. Fk.		
Walla Walla River, Main		
Walla Walla River, Little		
Couse Creek		
Dry Creek		
Pine Creek		
Umatilla River; Main		
Wildhorse Creek		
Umatilla R. (Cold Springs Reservoir)		
Umatilla River (McKay Res.)		
McKay Creek		
Birch Creek		
Butter Creek		
Willow Creek		
Rhea Creek		
Rock Creek (John Day tributary)		

Forecasts begin in the February 1 report which will be issued about February 10, 1970.



**WATERSHED LOCATION**

## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET Last Year	Average <sup>i</sup>
Butter Creek near Pine City					
McKay near Pilot Rock					
Umatilla near Gibbon					
Umatilla at Pendleton					
Walla Walla, North Fork near Milton					
Walla Walla, South Fork near Milton					

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>
Umatilla, Walla Walla, McKay Creek	3	96	100

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Cold Springs McKay	50.0 73.8	12.3 28.3	24.5 13.7	20.2 16.1

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Walla Walla	2	54	105
Umatilla	3	44	80
McKay	2	19	42

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS

10 0 10 20 30  
SCALE IN MILES



## LEGEND

- Watershed Boundary
- - - Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- Soil Moisture Station
- Precipitation Gage





# WATER SUPPLY OUTLOOK UPPER JOHN DAY WATERSHEDS OREGON

*as of*

JANUARY 1, 1970

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**U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER**

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## GENERAL OUTLOOK

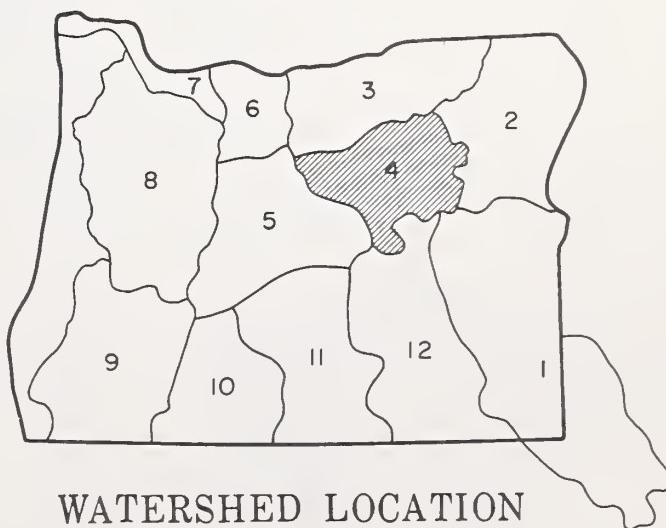
WATER SUPPLIES SHOULD BE NEAR AVERAGE THIS SUMMER. THE MOUNTAIN SNOWPACK IS NEAR NORMAL FOR JANUARY 1. SOIL MOISTURE IS AVERAGE EVEN THOUGH DECEMBER PRECIPITATION WAS 138% OF NORMAL. RUNOFF OF THE JOHN DAY AT SERVICE CREEK FOR THE OCTOBER TO DECEMBER PERIOD HAS BEEN 60% OF AVERAGE.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Beech Creek		
Beech Creek-Fox-Long Cr.		
Bridge-Mountain Creeks		
Camas Creek		
Cherry Creek		
Indian-Pine Creeks		
John Day River, Main Fork		
John Day River, Mid. Fork		
John Day River, N. Fork		
John Day River, S. Fork		
Monument-Kimberly		
Strawberry Creek		

Forecasts begin in the February 1 report which will be issued about February 10, 1970.



WATERSHED LOCATION

## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
John Day at Prairie City John Day, Middle Fork at Ritter Strawberry near Prairie City					

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>
John Day above Dayville North Fork John Day	5 2	83 96	90 103

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Clear Lake (Wasco)	11.9	b		

## SUMMARY of SNOW MEASUREMENTS

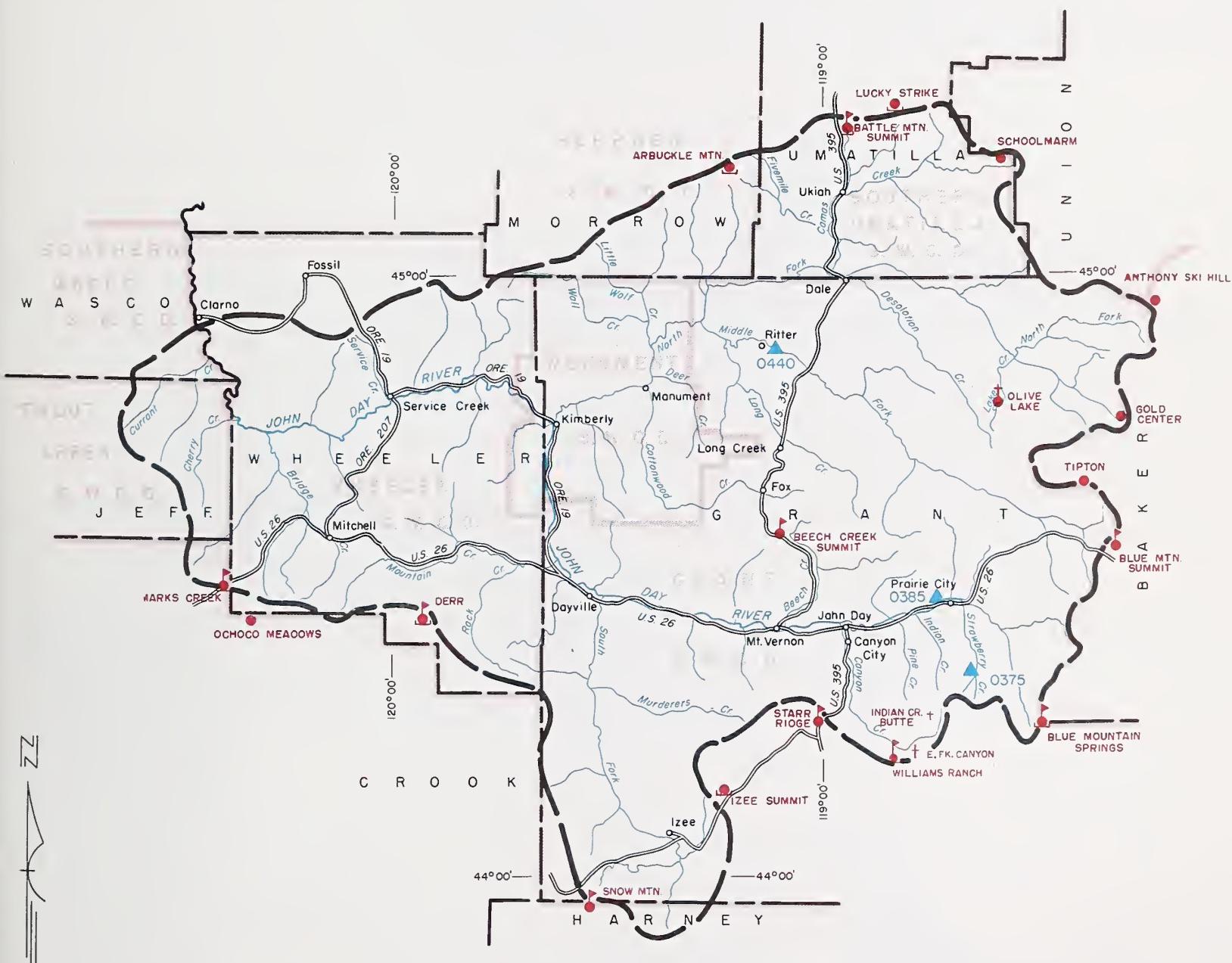
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
John Day, North Fork John Day abv. Dayville	3 3	69 72	97 107

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# UPPER JOHN DAY WATERSHEDS

10 0 10 20 30  
SCALE IN MILES



## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ▶ Soil Moisture Station
- † Aerial Snow Depth Gage
- Precipitation Gage





# WATER SUPPLY OUTLOOK UPPER DESCHUTES, CROOKED WATERSHEDS OREGON

*as of*

JANUARY 1, 1970

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U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

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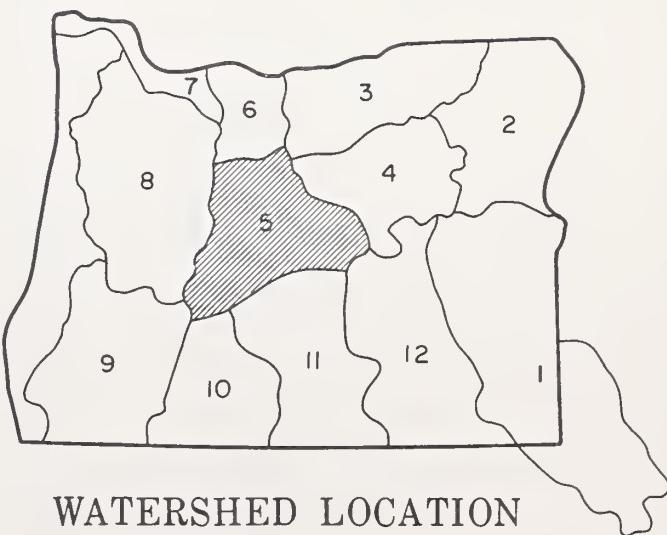
## GENERAL OUTLOOK

THE OUTLOOK IS FOR BELOW AVERAGE WATER SUPPLIES ON THE DESCHUTES AND CROOKED WATERSHEDS THIS SUMMER. MOUNTAIN SNOWPACKS CURRENTLY ARE BELOW AVERAGE RANGING FROM 50% TO 75% OF NORMAL. DECEMBER PRECIPITATION WAS 150% OF AVERAGE AND SOIL MOISTURE IS ABOUT WHAT IS USUALLY MEASURED JANUARY 1. WINTER FLOW, OCTOBER TO DECEMBER, OF THE DESCHUTES AT MOODY HAS BEEN 85% OF AVERAGE. STORED WATER IS 80% OF AVERAGE ON THE DESCHUTES AND 94% OF AVERAGE ON THE CROOKED RIVER.

## **WATER SUPPLY OUTLOOK**

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Arnold Irrigation District Bear Creek Beaver Creek Camp Creek Central Ore. Irrig. Dist. Crooked River Deschutes River Hay-Trout Creeks Lone Pine Irrig. Dist. Mill Creek North Unit Irrig. Dist. Ochoco Creek Sisters Irrigation Dist. Snow Creek Irrigation Dist. Squaw Creek Irrig. Dist. Swalley Ditch Tumalo Project Walker Basin Irrig. Dist.		Forecasts begin in the February 1 report which will be issued about February 10, 1970.



WATERSHED LOCATION

## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET Last Year
Crane Prairie Reservoir total Inflow Crescent at Crescent Lake d Crooked near Post Deschutes at Benham Falls d Deschutes below Snow Creek Deschutes, Little near Lapine d Ochoco Reservoir net Inflow Odell near Crescent Squaw near Sisters Tumalo near Bend d				

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value
Forecasts begin in the February 1 report which will be issued about February 10, 1970.			

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average i
Crane Prairie	55.3	32.4	29.4	40.2
Crescent Lake	86.9	32.2	25.9	44.3
Ochoco	47.5	17.9	2.6	19.2
Prineville	153.0	97.8	84.5	103.5
Wickiup	200.0	111.3	85.9	134.6

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average i
Crooked R., Upper Deschutes	1	89	98

## SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average i
Little Deschutes	2	55	70
Deschutes abv. Wickiup	1	59	79
Tumalo & Squaw Cr.	2	57	74
Crooked, Ochoco	1	22	53

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

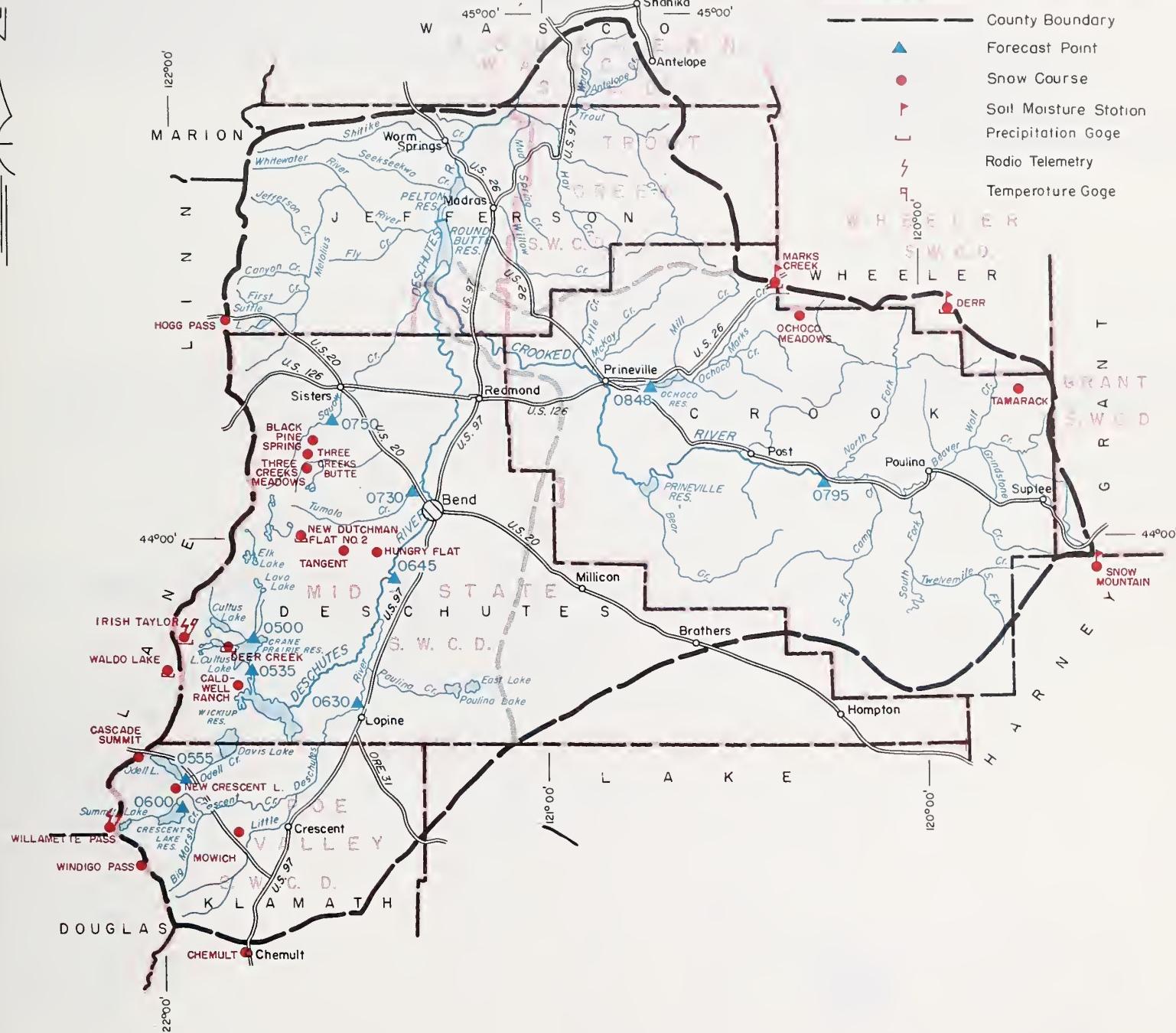
# UPPER DESCHUTES, CROOKED WATERSHEDS

10 0 10 20 30  
SCALE IN MILES

## LEGEND

Watershed Boundary  
Sub-watershed Boundary  
Soil Conservation District Bdry.

County Boundary  
Forecast Point  
Snow Course  
Soil Moisture Station  
Precipitation Gage  
Radio Telemetry  
Temperature Gage





# WATER SUPPLY OUTLOOK HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS OREGON

*as of*

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

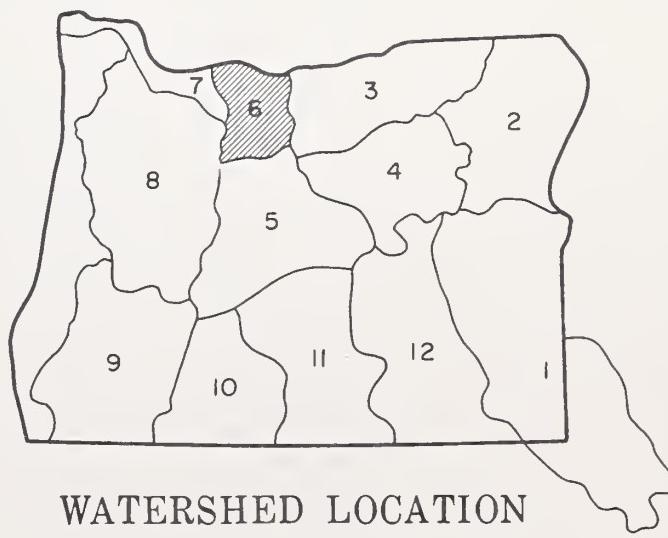
## GENERAL OUTLOOK

PROSPECTS ARE FOR NEAR AVERAGE WATER SUPPLIES THIS COMING SUMMER. THE SNOWPACK AROUND MT. HOOD AND ADJACENT WATERSHEDS IS ONLY SLIGHTLY BELOW THE JANUARY 1 AVERAGE. DECEMBER PRECIPITATION WAS EXCELLENT AND SOILS ARE SLIGHTLY WETTER THAN USUAL.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Aldridge Ditch (Tony Creek)		
Badger Creek		
Dee Irrigation District		
East Fork Irrig. Dist.		
Farmers Irrigation Dist.		
Hood River Irrig. Dist.		
Juniper Flat		
Middle Fork Irrig. Dist.		
Mile Creeks		
Mill Creek		
Mount Hood Irrig. Dist.		
Rock-Gate-Threemile Creeks		
Tygh Creek		
White River		



WATERSHED LOCATION

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <i>i</i>
Hood River near Hood River <sup>d</sup> Hood, West Fork near Dee White below Tygh Valley				NOTE: FORECASTS BEGIN ON FEB. 1, 1970.	

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <i>i</i>
Hood River, Mile Creeks	1	101	100

## SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <i>i</i>
Hood River	4	41	91
White River	3	41	89

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

10 0 10 20  
SCALE IN MILES



## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Sail Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- + Aerial Snow Depth Gage
- Sail Moisture Station
- [] Precipitation Gage
- Temperature Gage
- ⚡ Radio Telemetry



# WATER SUPPLY OUTLOOK LOWER COLUMBIA WATERSHEDS OREGON

*as of*

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

## GENERAL OUTLOOK

THE OUTLOOK IS FOR NEAR AVERAGE SUPPLIES OF WATER ON THE OREGON TRIBUTARIES OF THE LOWER COLUMBIA. THE UPPER COLUMBIA BASIN WILL HAVE BELOW AVERAGE STREAMFLOW. SNOW IN THE UPPER BASIN RANGES FROM 50% TO 80% OF NORMAL FOR JANUARY 1. THE SNOWPACK AROUND MT. HOOD IS AVERAGE. RIVER STAGES ALONG THE LOWER COLUMBIA WILL BE AVERAGE TO BELOW AVERAGE.



Report prepared by  
T.A. GEORGE AND H.M. VANCE  
U.S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE  
1218 S.W. WASHINGTON ST.  
PORTLAND, OREGON 97205

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average i
Sandy River	2	51	86

### STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET
	Thousand Acre Feet	Percent of Average		Last Year
Columbia at The Dalles				NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

### HISTORICAL DATA (Columbia River at The Dalles)

YEAR	STREAMFLOW <sup>d</sup> (1,000 A.F.)			PEAK (1,000 c.f.s.)	DATE
	APR.— SEPT.	APR.— JUNE	MAY— JUNE		
1953	100,600	64,900	55,800	609	June 17
1954	119,500	70,500	59,300	561	May 23
1955	99,500	58,300	50,300	545	June 26
1956	131,400	96,900	75,800	815	June 3
1957	105,700	80,500	67,200	700	May 22
1958	97,700	72,000	58,600	593	May 31
1959	112,500	71,900	58,900	555	June 23
1960	97,000	64,000	48,000	442	June 6
1961	101,400	74,400	64,000	699	June 8
1962	94,600	64,100	49,200	460	June 5
1963	87,000	56,300	46,200	437	June 18
1964	109,020	70,739	61,313	662	June 18
1965	114,137	80,024	62,477	520	June 9
1966	87,268	58,120	45,922	396	June 12
1967	107,771	72,903	65,112	622	June 10
1953-67 Avg.	105,181	72,408	59,689	574	

### LOWER COLUMBIA RIVER FLOOD STAGES (with 9.5' tide at Astoria)

VANCOUVER GAGE (Weather Bu.)	FLOW AT THE DALLES (1,000 c.f.s.)	DRAINAGE DISTRICT PUMPHOUSE						
		SANDY	SAUVIE ISL.	SCAPPOOSE	DEER ISL.	RAINIER	BEAVER	WOODSON
RIVER MILES								
		118.9	96.0	91.0	77.0	62.0	52.0	47.0
35 (1894)	1210	41.2	34.2	33.3	28.5	21.9	17.5	15.5
34	1160	40.5	33.5	32.5	27.7	21.2	17.0	15.0
33	1100	39.6	32.4	31.4	26.7	20.2	16.1	14.3
32	1050	38.9	31.5	30.5	25.7	19.5	15.4	13.7
31 (1948)	1000	38.0	30.7	29.5	25.1	18.8	14.7	13.0
30	943	36.6	29.5	28.5	24.3	18.1	14.0	12.4
29	897	35.5	28.5	27.7	23.7	17.5	13.4	11.8
28	853	34.3	27.5	26.7	22.8	17.0	13.0	11.4
27 (1956)	811	33.0	26.5	25.6	21.8	16.2	12.5	11.0
26 (1950)	771	32.1	25.5	24.6	20.9	15.5	12.2	10.7
25	733	30.7	24.2	23.2	19.7	14.6	11.7	10.3
24	697	29.7	23.0	22.2	19.0	14.1	11.4	10.2
23	662	29.0	22.3	21.4	18.4	13.6	11.2	10.0
22	628	28.1	21.4	20.3	17.2	13.0	10.9	9.7
21	595	27.2	20.7	19.5	16.4	12.6	10.6	9.6
20 (1954)	564	26.2	19.8	18.6	15.5	12.1	10.2	9.4
19	534	25.5	19.2	18.0	15.0	11.8	10.0	9.3
18	501	24.4	18.3	17.2	14.3	11.4	9.8	9.1
17	479	23.4	17.4	16.4	13.7	11.0	9.6	8.9
16	452	22.4	16.5	15.5	13.0	10.5	9.3	8.7

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records.

# LOWER COLUMBIA WATERSHEDS

10 0 10 20 30  
SCALE IN MILES



WATERSHED LOCATION

## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- (50) River Miles
- Snow Course
- Temperature
- ⚡ Radio Telemetry





# WATER SUPPLY OUTLOOK WILLAMETTE WATERSHEDS OREGON

*as of*

JANUARY 1, 1970

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U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

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## GENERAL OUTLOOK

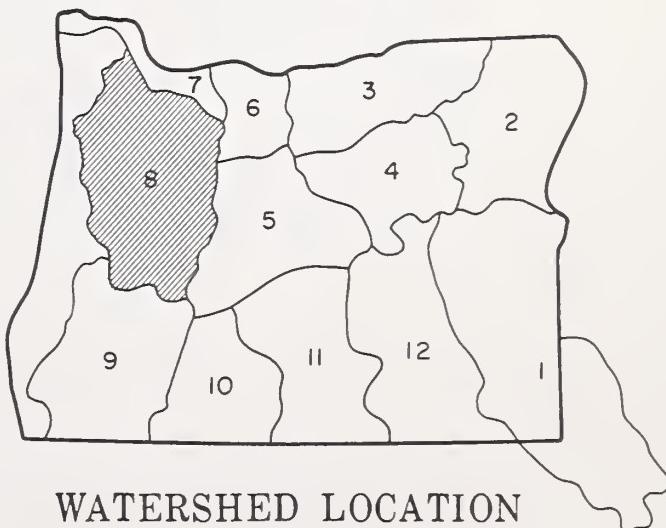
AVERAGE WATER SUPPLIES ARE THE PROSPECT FOR THIS AREA. SNOWPACK CONDITIONS ARE NEAR NORMAL. DECEMBER PRECIPITATION WAS 113% OF AVERAGE. THE FLOW OF THE MIDDLE FORK OF THE WILLAMETTE BELOW THE NORTH FORK IS 70% OF THE OCTOBER TO DECEMBER AVERAGE. MULTIPURPOSE POWER RESERVOIRS ARE BEING HELD AT LOW LEVELS.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Calapooya		
Clackamas		
McKenzie		
Molalla		
Santiam, North		
Santiam, South		
Willamette, Coast Fork		
Willamette, Middle Fork		

Forecasts begin in  
the February 1  
report which will  
be issued about  
February 10, 1970.



WATERSHED LOCATION

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD	
	FORECAST Thousand Acre Feet	Percent of Average	FORECAST PERIOD	THOUSAND ACRE FEET
			Last Year	Average <sup>i</sup>
Clackamas at Big Bottom	c			
Clackamas at Estacada	c			
Clackamas above Three Lynx	c			
McKenzie at McKenzie Bridge	c			
McKenzie near Vida	c			
Oak Grove Fork above Power Intake	c			
Row near Dorena	c			
Santiam, North at Mehama <sup>d</sup>	c			
Santiam, South at Waterloo	c			
Willamette, Mid. Fk. blw. N. Fk. Nr. Oakridge <sup>d</sup>	c			
Willamette at Salem <sup>d</sup>	c			

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

## SUMMARY of SNOW MEASUREMENTS

(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
Clackamas	2	34	101
Santiam	4	47	86
McKenzie	3	88	78
Willamette, Mid. Fk.	3	45	77
Row	2	58	133

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Cottage Grove	30.0*	0.2	0.3	2.2
Cougar	155.2*	8.8	0.2	--
Detroit	299.9*	13.1	0.0	40.2
Dorena	70.5*	2.7	0.7	9.1
Fall Creek	115.0*	0.0	0.0	--
Fern Ridge	94.2*	0.1	0.8	14.5
Foster	30.0*	1.4	0.5	--
Green Peter	270.0*	10.1	1.3	--
Hills Creek	200.0*	0.0	0.0	183.2
Lookout Point	337.2*	56.3	0.0	75.2
Timothy Lake	61.7	41.5	61.9	46.4

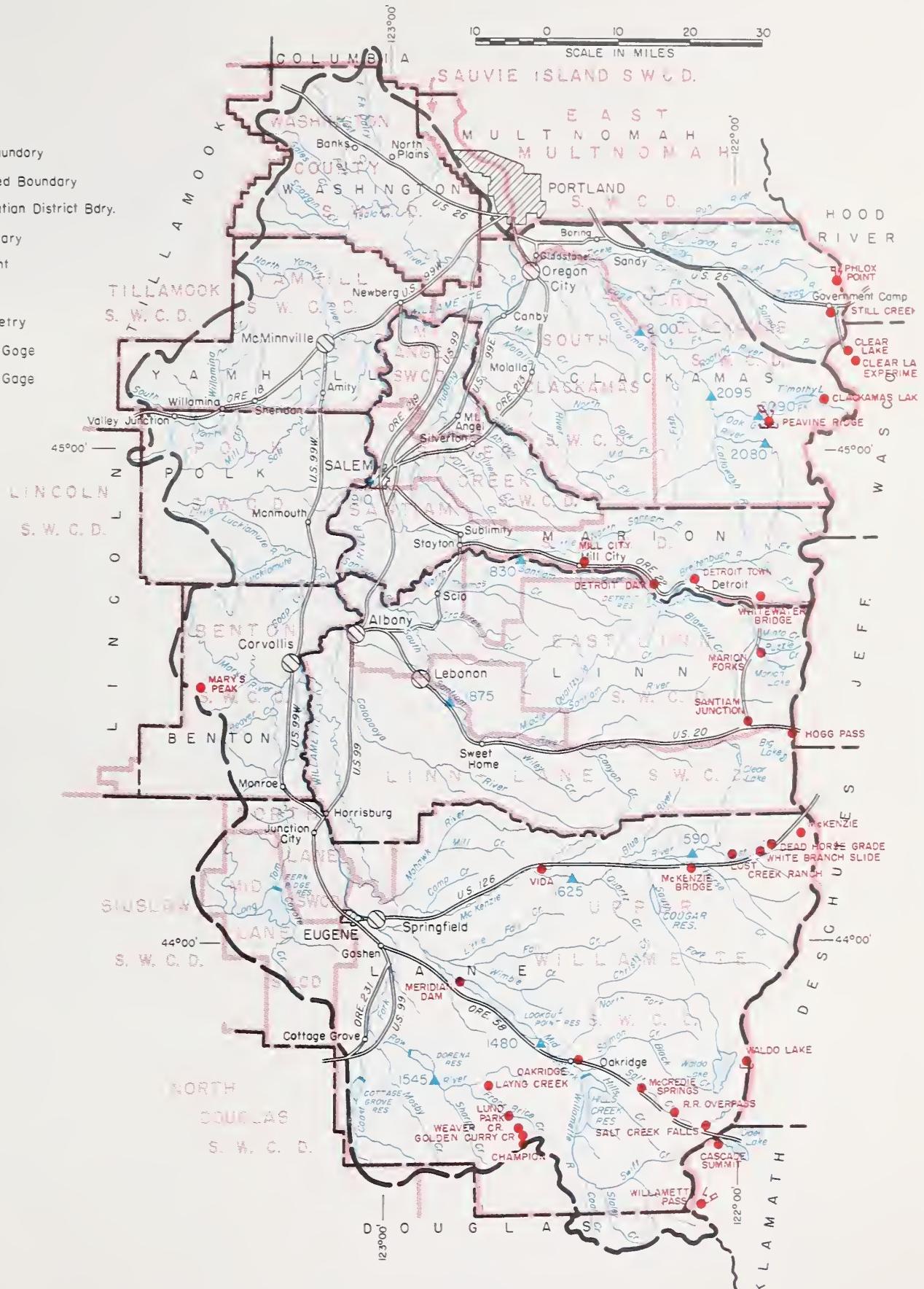
\*Multiple purpose reservoir--space reserved primarily for flood runoff.

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# WILLAMETTE WATERSHEDS

## LEGEND

- Watershed Boundary
  - Sub-watershed Boundary
  - Soil Conservation District Bdry.
  - County Boundary
  - Forecast Point
  - Snow Course
  - Radio Telemetry
  - Precipitation Gage
  - Temperature Gage







# WATER SUPPLY OUTLOOK ROGUE, UMPQUA, WATERSHEDS OREGON

*as of*

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

## GENERAL OUTLOOK

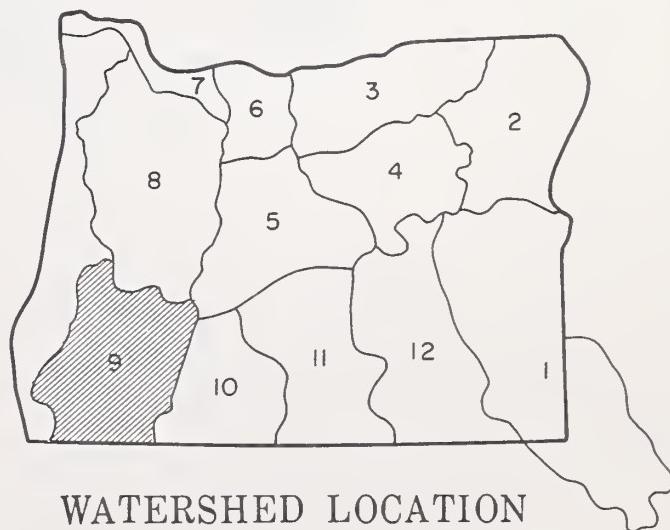
THE PRESENT OUTLOOK IS FOR AVERAGE TO SLIGHTLY BELOW AVERAGE WATER SUPPLIES NEXT SPRING AND SUMMER FOR THIS AREA. THE SNOWPACK IS 60% TO 70% OF NORMAL IN THE CASCADES AND NEAR NORMAL IN THE SISKIYOUS. PRECIPITATION DURING DECEMBER WAS 131% OF NORMAL. WATER STORED IN RESERVOIRS IS AT NORMAL LEVELS FOR JANUARY 1. THE OCTOBER TO DECEMBER FLOW OF THE ROGUE AT RAYGOLD IS 72% AND THE UMPQUA NEAR ELKTON IS 77% OF AVERAGE.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Althouse Creek		
Applegate River, Big		
Applegate River, Little		
Ashland Creek		
Butte Creek, Big		
Butte Creek, Little		
Cow Creek		
Deer Creek		
Elk Creek		
Emigrant Creek (abv. Res.)		
Evans Creek		
Gold Hill Irrigation Dist.		
Grants Pass Irrig. Dist.		
Grave Creek		
Illinois River, East Fork		
Illinois River, West Fork		
Jump-off-Joe Creek		
Neil Creek		
Red Blanket Creek		
Rogue River		
Sucker Creek		
Table Rock Irrig. Dist.		
Thompson Creek		
Wagner Creek		
Williams Creek		

Forecasts begin in  
the February 1  
report which will  
be issued about  
February 10, 1970.



WATERSHED LOCATION

## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Applegate near Copper					
Clearwater above Trap Creek <sup>d</sup>					
Fourmile Lake net Inflow <sup>d</sup>					
Hyatt Reservoir net Inflow <sup>d</sup>					
Illinois River near Kerby					
Little Butte, N. Fk. at Fish Lake nr. Lake Cr. <sup>d</sup>					
Little Butte, S. Fork near Lake Creek					
Note: Minimum flow will drop to 100 c.f.s. by <sup>c</sup> .				NOTE: FORECASTS BEGIN ON FEB. 1, 1970.	
Rogue above Prospect					
Rogue, South Fork near Prospect <sup>d</sup>					
Rogue below South Fork					
Rogue at Raygold near Central Point					
Rogue at Grants Pass					
Umpqua, No. blw. Lemolo Res. nr. Toketee Falls <sup>d</sup>					

## FORECAST DATE of LOW FLOW VALUES

FORECAST POINT	Low Flow Value Second/Ft.	Forecast Date Stream Will Recede to Low Flow Value	Average Date of Low Flow Value	RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH		
				RESERVOIR	Usable Capacity	Usable Storage This Year      Last Year      Average <sup>i</sup>
Forecasts begin in the February 1 report which will be issued about February 10, 1970.				Emigrant Lake	39.0	19.5      18.7      19.7*
				Fish Lake	7.8	5.2      2.8      5.2
				Fourmile Lake	16.1	9.0      1.2      8.8
				Howard Prairie	60.0	42.3      18.9      32.8
				Hyatt Prairie	16.1	11.6      7.2      9.2
*Average for years of record after reconstruction.						

## SUMMARY of SNOW MEASUREMENTS

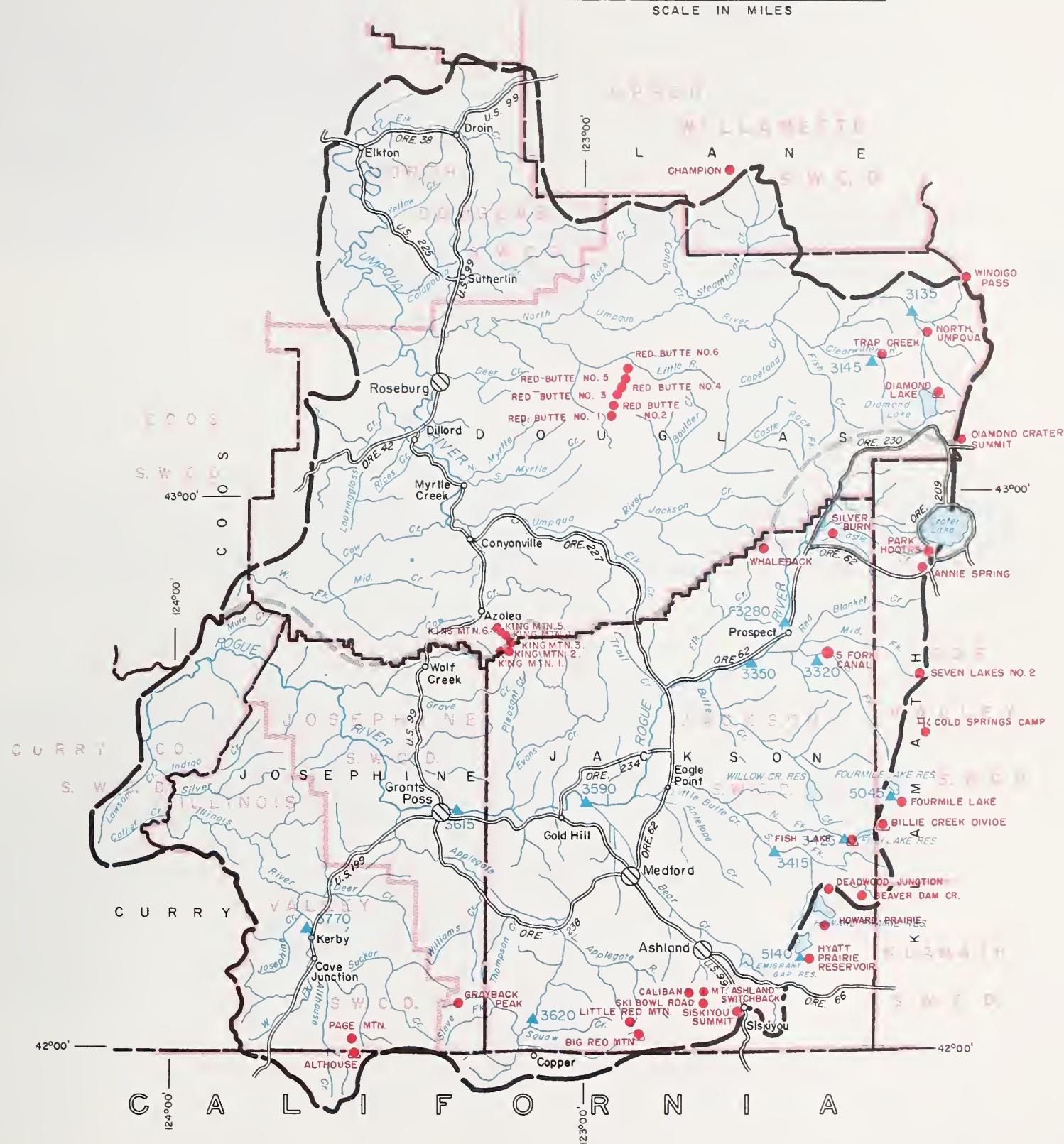
(COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>
North Umpqua	3	51	59
Rogue	3	47	71
Butte Creek	4	28	59
Bear Creek	1	25	91

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# ROGUE, UMPQUA WATERSHEDS

10 0 10 20 30  
SCALE IN MILES



## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- Precipitation Gage
- ⚡ Radio Telemetry
- Temperature Gage





# WATER SUPPLY OUTLOOK KLAMATH WATERSHEDS OREGON

*as of*

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

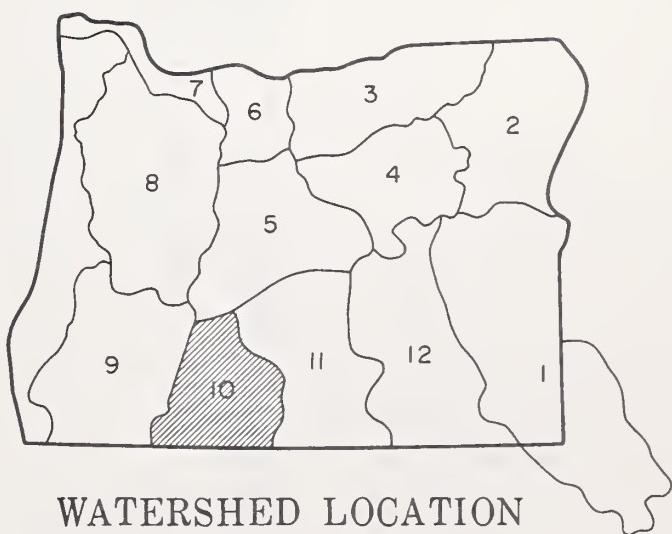
## GENERAL OUTLOOK

SLIGHTLY BELOW NORMAL WATER SUPPLIES ARE THE PRESENT OUTLOOK FOR THIS AREA. THE SNOWPACK IS ABOUT 50% OF NORMAL AND NEAR AVERAGE SOIL MOISTURE CONDITIONS PREVAIL. PRECIPITATION DURING DECEMBER WAS 163% OF AVERAGE. FALL AND EARLY WINTER RUNOFF HAS BEEN BELOW AVERAGE. RESERVOIRS ARE HOLDING MORE THAN NORMAL AMOUNTS FOR JANUARY 1. THE NET INFLOW TO KLAMATH LAKE IS 82% OF AVERAGE FOR THE OCTOBER TO DECEMBER PERIOD.

## **WATER SUPPLY OUTLOOK**

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Ft. Klamath Valley Lost River (Clear Lake) Lost River (Gerber) Lost River (Willow Res.) Sprague River Upper Klamath Lake Williamson River		Forecasts begin in the February 1 report which will be issued about February 10, 1970.



WATERSHED LOCATION

## STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average i
Clear Lake Reservoir Inflow k Gerber Reservoir Inflow k Sprague near Chiloquin Upper Klamath Lake net Inflow k Williamson below Sprague River					
			NOTE: FORECASTS BEGIN ON FEB. 1, 1970.		

## SOIL MOISTURE

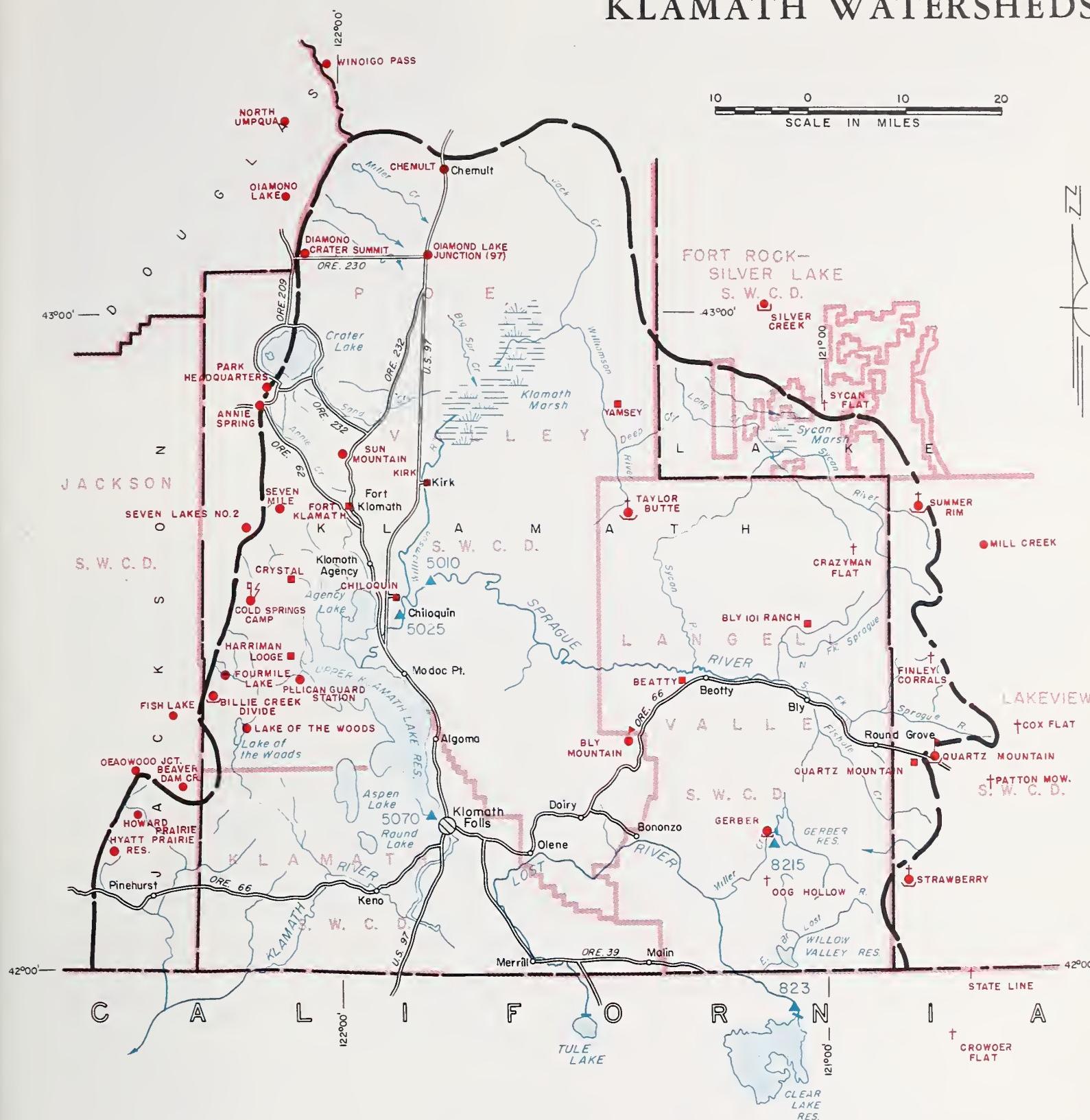
RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:		RESERVOIR	Usable Capacity	Usable Storage		
		Last Year	Average i			This Year	Last Year	Average i
Upper Klamath	2	104	89	Clear Lake Gerber Upper Klamath Lake	440.2 94.0 584.0	248.9 66.3 364.5	141.2 20.3 331.1	191.7 36.4 351.3

## SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average i
Williamson	3	56	59
Sprague	2	31	54
Upper Klamath	7	45	57
Lost River	1	53	136

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# KLAMATH WATERSHEDS



## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Soil Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- ⊕ Aerial Snow Depth Gage
- PP&L Snow Station
- ▲ Soil Moisture Station
- ▶ Precipitation Gage
- ⚡ Radio Telemetry
- ⓧ Temperature Gage



# WATER SUPPLY OUTLOOK LAKE COUNTY, GOOSE LAKE WATERSHEDS OREGON

*as of*

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

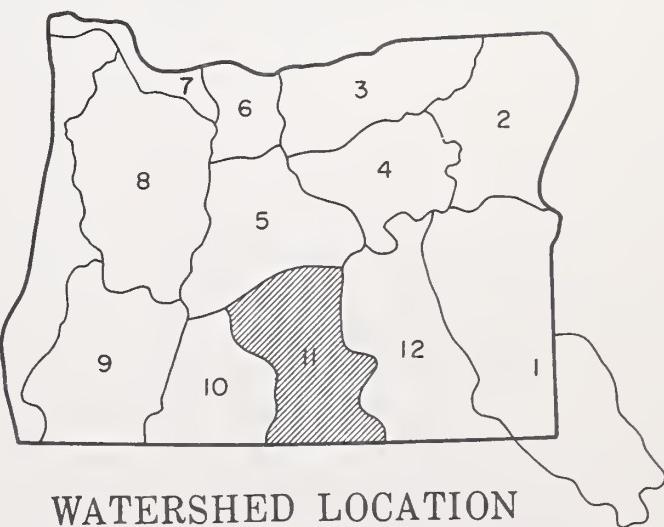
## GENERAL OUTLOOK

THE JANUARY 1 SNOWPACK IS 55% TO 60% OF AVERAGE AND ABOUT 40% OF LAST YEAR. SOIL MOISTURE CONDITIONS ABOVE AVERAGE IN THE CHEWAUCAN, SILVER, AND DREW CREEK DRAINAGES AND ABOUT 60% OF AVERAGE IN THE HONEY AND DEEP CREEK DRAINAGES. THE DECEMBER PRECIPITATION IS 159% OF NORMAL. THE PRESENT OUTLOOK IS FOR SOMEWHAT RESTRICTED WATER SUPPLIES FOR NEXT SPRING AND SUMMER. JANUARY 1 STORED WATER SUPPLIES ARE 130% OF AVERAGE.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Chewaucan		
Crooked Creek		
Deep Creek		
Dry Creek		
East Side Goose Lake		
Guano Lake		
Honey Creek		
Lakeview Water Users Assn.		
Rock Creek (Hart Mtn.)		
Silver-Buck Creeks		
Summer Lake		
Thomas Creek		
Twenty-mile Creek		
Warner Lakes		
		Forecasts begin in the February 1 report which will be issued about February 10, 1970.



WATERSHED LOCATION

Report prepared by  
T.A. GEORGE AND H.M. VANCE

U. S. DEPARTMENT OF AGRICULTURE - SOIL CONSERVATION SERVICE

1218 S.W. WASHINGTON ST.  
PORTLAND, OREGON 97205

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <sup>i</sup>
Chewaucan near Paisley Deep above Adel Drews Reservoir net Inflow <sup>d</sup> Honey Creek near Plush Silver Creek near Silver Lake Twentymile near Adel					

NOTE: FORECASTS BEGIN ON FEB. 1, 1970.

## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:	
		Last Year	Average <sup>i</sup>

Chewaucan R., Silver Cr., Drew Creek	1	155	129
Honey, Deep, 20 Mile Crs.	1	60	62

## RESERVOIR STORAGE (Thousand Ac. Ft.) END OF MONTH

RESERVOIR	Usable Capacity	Usable Storage		
		This Year	Last Year	Average <sup>i</sup>
Cottonwood	8.7	2.9	1.0	2.1*
Drews	63.0	40.1	12.4	31.0
Thompson Valley	19.5	b		11.1

\*Average for years of record after reconstruction.

## SUMMARY of SNOW MEASUREMENTS (COMPARISON WITH PREVIOUS YEARS)

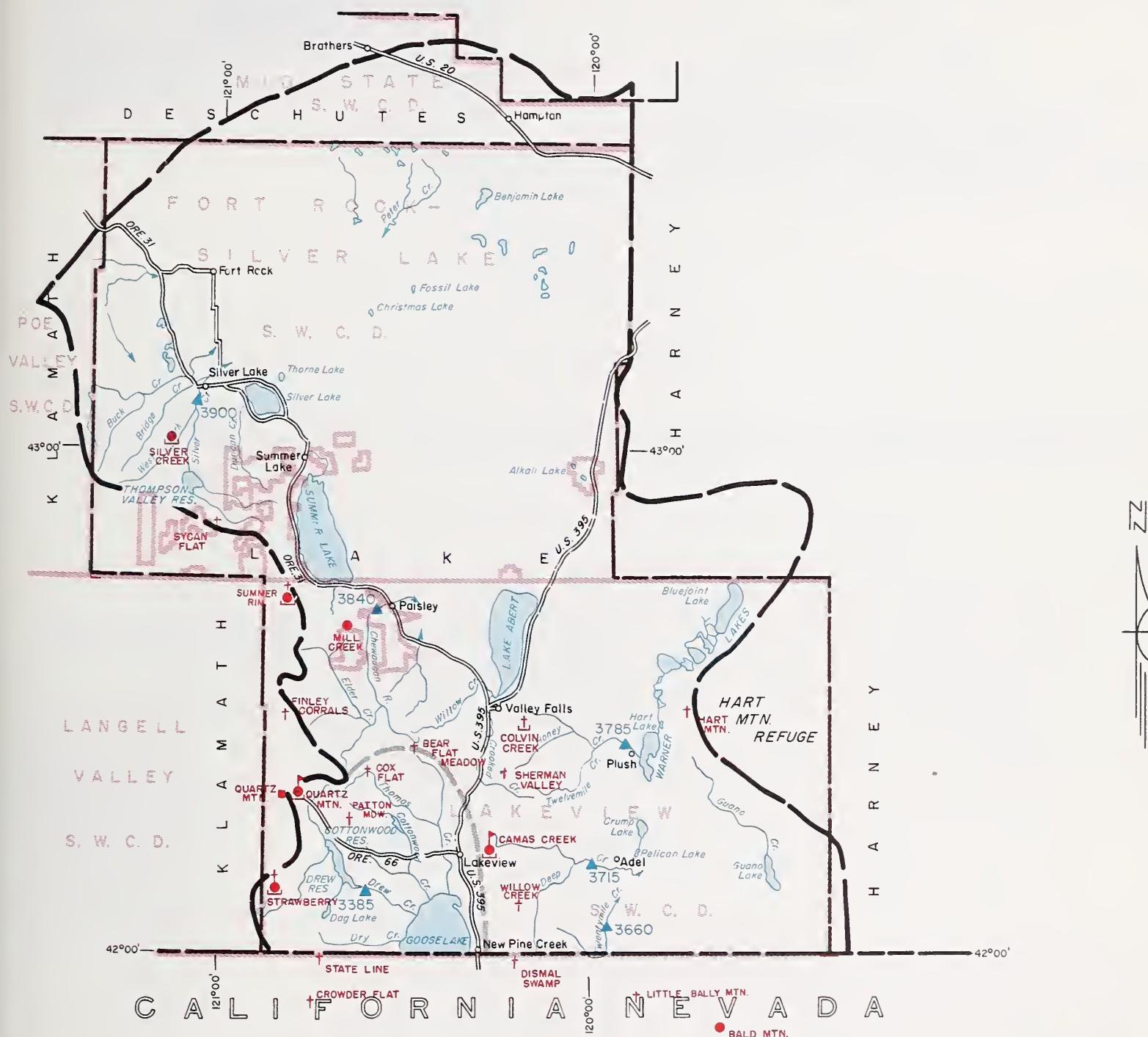
RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged	THIS YEAR'S SNOW WATER AS PERCENT OF	
		Last Year	Average <sup>i</sup>

Chewaucan	2	32	55
Honey Creek	1	42	62
Deep Creek	1	42	52
Silver Creek	2	40	52
Drew Creek	1	38	63

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# LAKE COUNTY, GOOSE LAKE WATERSHEDS

10 0 10 20 30  
SCALE IN MILES



## LEGEND

- Watershed Boundary
- Sub-watershed Boundary
- Sail Conservation District Bdry.
- County Boundary
- ▲ Forecast Point
- Snow Course
- † Aerial Snow Depth Gage
- PP & L Snow Station
- Soil Moisture Station
- ▶ Precipitation Gage





# WATER SUPPLY OUTLOOK HARNEY BASIN WATERSHEDS OREGON

*as of*

JANUARY 1, 1970

U. S. D. A. SOIL CONSERVATION SERVICE  
OREGON STATE UNIVERSITY ... OREGON STATE ENGINEER

## GENERAL OUTLOOK

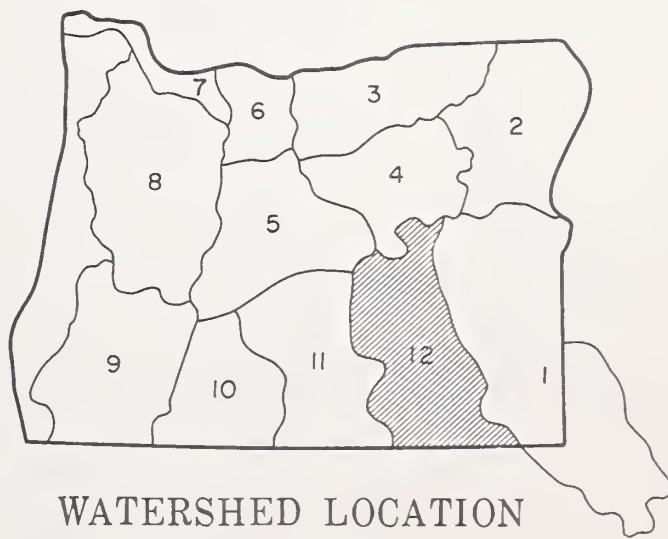
WATER SUPPLIES WILL BE NEAR AVERAGE WITH A NEAR NORMAL SNOWPACK. SOIL MOISTURE IS 90% OF THE AVERAGE FOR JANUARY 1 AND 73% OF LAST YEAR. THE PRECIPITATION WAS 182% OF AVERAGE FOR DECEMBER.

## WATER SUPPLY OUTLOOK

Expressed as "Poor, Fair, Average, Excellent" With Respect to Usual Supply.

STREAM or AREA	Flow Period	
	Spring Season	Late Season
Catlow Valley		
Cow Creek		
Donner und Blitzen River		
Mill-Coffeepot Creeks		
Rattlesnake Creek		
Silver Creek		
Silvies River		
Soldier-Prather Creek		
Trout Creek		
Whitehorse Creek		

Forecasts begin in the February 1 report which will be issued about February 10, 1970.



WATERSHED LOCATION

# STREAMFLOW FORECASTS

BASIN, STREAM and/or FORECAST POINT	THIS YEAR		PAST RECORD		
	FORECAST		FORECAST PERIOD	THOUSAND ACRE FEET	
	Thousand Acre Feet	Percent of Average		Last Year	Average <i>i</i>
Donner und Blitzen near Frenchglen Silver near Riley Silvies River near Burns Trout Creek near Denio					
			NOTE: FORECASTS BEGIN ON FEB. 1, 1970.		

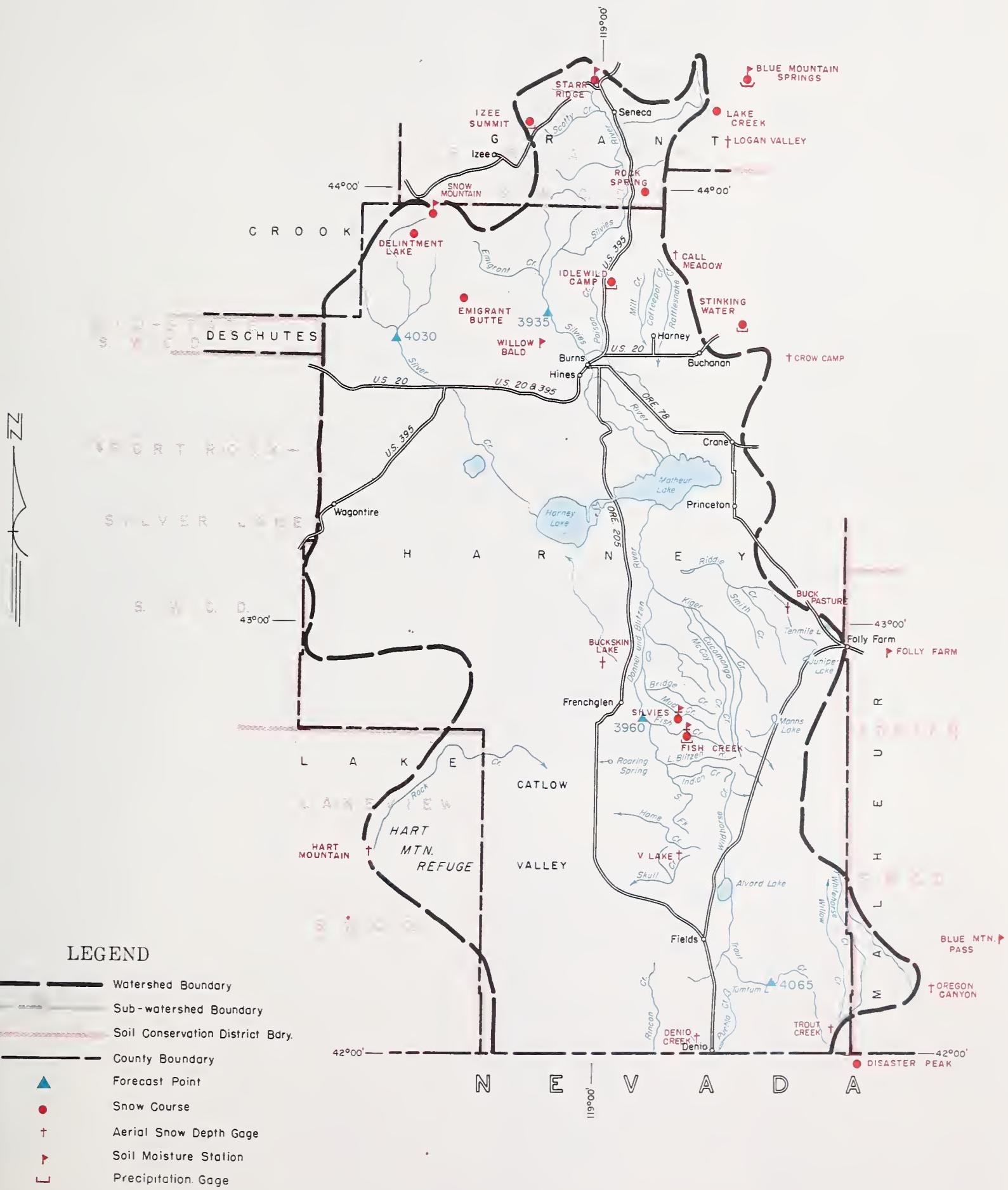
## SOIL MOISTURE

RIVER BASIN	Number of Stations	THIS YEAR'S MOISTURE as PERCENT OF:		THIS YEAR'S SNOW WATER AS PERCENT OF			
		Last Year	Average <i>i</i>	RIVER BASIN and/or SUB-WATERSHED	Number of Courses Averaged		
Silvies R., Silver Cr.	2	73	90	Silvies Silver Creek Donner und Blitzen	4 1	77 44	110 84

(a) Assuming normal meteorological conditions. (b) No report. (c) Not scheduled. (d) Corrected to natural flow. (e) Aerial snow depth gage, water content estimated. (f) Nearest current data. (g) Partly estimated. (h) 1953-67 adjusted average. (i) 1953-67, 15 year average. (j) Telephonic report - data not confirmed. (k) Data from PP&L Co. or USBR records. (m) Average for 5 or more years in base period.

# HARNEY BASIN WATERSHEDS

10 0 10 20 30  
SCALE IN MILES





# BASIC DATA SUPPLEMENT 1

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.		
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.	Ave†
OWYHEE, MALHEUR WATERSHEDS						
Antelope Ridge	c					
Battle Creek (Ida.)	c					
Bear Creek (Nev.)	No Report			8.8	6.6 <sup>h</sup>	
Big Bend (Nev.)	12/29	20	3.6	5.5	2.6 <sup>h</sup>	
Blue Mountain Springs	12/29	27	5.8	7.2	5.6 <sup>h</sup>	
Buck Pasture	c					
Buckskin, Lower (Nev.)	c					
Buckskin, Upper (Nev.)	c					
Bull Basin (Ida.)	c					
Bully Creek	c					
Call Meadow	c					
Columbia Basin (Nev.)	c					
Cottonwood-Indian	c					
Crane Prairie	c					
Crow Camp	c					
Disaster Peak (Nev.)	c					
Eldorado Pass	12/30	14	3.2	2.1	1.2 <sup>h</sup>	
Fawn Creek (Nev.)	c					
Fish Creek	c					
Flag Prairie	c					
Fox Creek (Nev.)	c					
Fry Canyon (Nev.)	12/30	17	3.1	6.4	2.3 <sup>h</sup>	
Gold Creek	12/29	10	1.5	4.0	1.6 <sup>h</sup>	
Granite Peak (Nev.)	c					
Hyde Pasture (Ida.)	c					
Jack Creek, Lower (Nev.)	c					
Jack Creek, Upper (Nev.)	c					
Jack Peak (Nev.)	c					
Lake Creek R. S.	12/29	19	3.7	5.0	3.7 <sup>h</sup>	
Laurel Draw (Nev.)	c					
Logan Valley	c					
Lookout Butte	c					
Louse Canyon	c					
Martin Creek (Nev.)	c					
Merritt Mountain (Nev.)	c					
Midas (Nev.)	c					
Mud Flat (Ida.)	c					
Oregon Canyon	c					
Quinn Ridge (Nev.)	c					
Red Canyon (Ida.)	c					
Rock Spring	12/29	12	2.1	2.3	1.5 <sup>h</sup>	
Rodeo Flat (Nev.)	12/30	14	2.5	5.7	2.4 <sup>h</sup>	
76 Creek (Nev.)	c					
Silver City (Ida.)	1/5	20	4.9	7.3	4.9 <sup>h</sup>	
Silvies	c					
South Mountain #2 (Ida.)	12/29	17	4.6	7.4	3.6 <sup>h</sup>	
Stag Mountain (Nev.)	c					
Stinking Water	12/30	5	1.1	2.5	1.3 <sup>h</sup>	
Succor Creek (Ida.)	c					
Taylor Canyon (Nev.)	12/31	15	2.3	3.4	1.6 <sup>h</sup>	
Toe Jam (Nev.)	c					
Tremewan Ranch (Nev.)	12/31	6	1.0	2.8	0.4 <sup>h</sup>	
Triangle (Ida.)	c					
Trout Creek	c					
"V" Lake	c					
Vaught Ranch (Ida.)	c					
War Eagle (Ida.)	c					

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.		
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.	Ave*
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS						
Aneroid Lake #1	c					
Aneroid Lake #2	c					
Anthony Lake	12/30	33		8.5	12.6	11.0
Bald Mountain (Ore.)	c					
Beaver Reservoir	12/26	15		2.2	3.8	3.7 <sup>h</sup>
Big Sheep	c					
Blue Mtn. Summit	12/30	17		3.3	4.2	2.9
Bourne	c					
County Line	12/30	7		1.0	3.2	2.2
Dooley Mountain	12/31	15		4.5	5.0	3.1
Eilertson Meadows	12/29	18		3.8	4.6	4.4
Eldorado Pass	12/30	14		3.2	2.1	1.2 <sup>h</sup>
Gold Center	c					
Goodrich Lake	1/3	39		12.8	--	--
Intake House	12/29	22		4.5	5.0	--
Little Alps	12/30	19		4.2	8.7	4.8 <sup>h</sup>
Little Antone	12/30	18		3.5	4.5	--
Lucky Strike	c					
Meacham	12/23	6		1.4	5.0	2.5 <sup>h</sup>
Mirror Lake	c					
Moss Springs	12/31	28		6.7	10.6	9.0 <sup>h</sup>
Power Plant	12/29	16		3.8	2.6	--
Schneider Meadows	c					
Schoolmarm	12/30	7		0.9	3.0	1.8
Standley	c					
Taylor Green	c					
Tipton	12/30	18		3.8	4.3	3.8
Tollgate	12/30	34		8.2	13.4	8.1 <sup>h</sup>
TV Ridge	c					
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS						
Arbuckle Mountain	c					
Battle Mountain Summit	12/23	2		0.3	1.4	0.9 <sup>m</sup>
Blue Mountain Camp	12/30	17		4.0	8.8	3.5 <sup>m</sup>
Emigrant Springs	12/23	3		0.4	4.2	1.8 <sup>h</sup>
Lucky Strike	c					
Meacham	12/23	6		1.4	5.0	2.5 <sup>h</sup>
Tollgate	12/30	34		8.2	13.4	8.1 <sup>h</sup>
Walla Walla Diversion	c					
Weston Mountain	12/30	3		0.6	0.4	--
UPPER JOHN DAY WATERSHEDS						
Anthony Lake	12/30	33		8.5	12.6	11.0
Arbuckle Mountain	c					
Battle Mountain Summit	12/23	2		0.3	1.4	0.9 <sup>m</sup>
Beech Creek Summit	12/30	9		1.3	3.2	1.5 <sup>h</sup>
Blue Mountain Springs	12/29	27		5.8	7.2	5.6 <sup>h</sup>
Blue Mountain Summit	12/30	17		3.3	4.2	2.9
Derr	c					
East Fork Canyon	c					
Gold Center	c					
Indian Creek Butte	c					
Izee Summit	12/30	12		2.6	4.1	2.5 <sup>h</sup>
Lucky Strike	c					
Marks Creek	12/24	5		0.7	3.2	1.3 <sup>m</sup>
Ochoco Meadows	c					
Olive Lake	c					
Schoolmarm	12/30	7		0.9	3.0	1.8
Snow Mountain	c					
Starr Ridge	12/29	11		2.3	3.0	2.0 <sup>h</sup>
Tipton	12/30	18		3.8	4.3	3.8
Williams Ranch	c					

# BASIC DATA SUPPLEMENT 1

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR		PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)
	Last Yr.	Ave.*		
UPPER DESCHUTES, CROOKED WATERSHEDS				
Black Pine Spring	c			
Caldwell Ranch	c			
Cascade Summit	12/31	34	8.0	13.5
Chemult	1/6	11	2.2	4.9
Deer Creek	c			
Derr	c			
Hogg Pass	12/30	48	13.5	20.5
Hungry Flat	1/1	10	1.4	3.0
Irish-Taylor	c			
Marks Creek	12/24	5	0.7	3.2
Mowich	c			
New Crescent Lake	c			
New Dutchman Flat #2	1/1	46	14.1	24.0
Ochoco Meadows	c			
Snow Mountain	c			
Tamarack	c			
Tangent	1/1	28	6.8	9.6
Three Creek Butte	c			
Three Creek Meadow	c			
Waldo Lake	c			
Willamette Pass	c			
Windigo Pass (DISCONTINUED)				
Willamette Pass Pillow	1/1		12.2	

## HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS

Brooks Meadows	c			
Clear Lake	12/29	15	3.2	8.4
Clear Lake (Experimental)	12/29	27	5.5	9.8
Cooper Spur	1/2	16	4.6	11.3
Cooper Spur (Alternate)	1/2	20	5.5	12.4
Greenpoint Reservoir	c			
Knebal Springs	c			
Lambert Point (DISCONTINUED)				
Parkdale	1/2	T	T	4.0
Phlox Point	12/31	57	17.2	38.4
Red Hill	c			
Still Creek	12/29	26	6.8	19.0
Switchback	No Report			7.1
Tilly Jane	c			
Ulrich Ranch Junction	c			
Umbrella Falls	1/1	61	17.7	33.8
Upper Valley	1/2	14	3.8	8.9

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR		PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)
	Last Yr.	Ave.*		
WILLAMETTE WATERSHEDS				
Cascade Summit	12/31	34	8.0	13.5
Cascade Summit Alternate	No Report			12.2
Champion	12/31	38	9.7	17.1
Clackamas Lake	c			7.7 <sup>h</sup>
Clear Lake	12/29	15	3.2	8.4
Clear Lake (Experimental)	12/29	27	5.5	9.8
Dead Horse Grade	1/2	19	4.0	4.9
Detroit Town	12/30	0	0.0	1.8
Detroit Dam	12/30	0	0.0	1.3
Golden Curry Creek	12/31	12	2.4	3.6
Hogg Pass	12/30	48	13.5	20.5
Laying Creek	12/31	0	0.0	0.0
Lost Creek Ranch	1/2	0	0.0	2.7
Lund Park	12/31	0	0.0	0.0
Marion Forks	12/30	7	2.1	9.0
Marys Peak	c			
McCredie Springs	12/31	0	0.0	2.6
McKenzie	1/2	47	13.1	15.1
McKenzie Bridge	1/2	0	0.0	1.5
Meridian Dam	12/31	0	0.0	T
Mill City	12/30	0	0.0	T
Oakridge	12/31	0	0.0	T
Peavine Ridge	12/30	19	4.3	--
Phlox Point	12/31	57	17.2	38.4
Railroad Overpass	12/31	3	0.4*	4.2
Salt Creek Falls	12/31	17	3.4	8.3
Santiam Junction	12/30	31	7.4	15.0
Still Creek	12/29	26	6.8	19.0
Vida	1/2	0	0.0	0.2
Waldo Lake	c			
Weaver Creek	12/31	0	0.0	0.0
White Branch Slide	1/2	15	3.5	3.4
Whitewater Bridge	12/30	3	0.9	5.4
Willamette Pass	c			
Willamette Pass Pillow	1/1		12.2	

\*Estimated.

# BASIC DATA SUPPLEMENT 1

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.

### ROGUE, UMPQUA WATERSHEDS

Althouse	c				
Annie Spring	12/30	55	15.6	22.4	14.9
Beaver Dam Creek	12/31	14	2.5	11.9	4.6 <sup>m</sup>
Big Red Mountain	c				
Billie Creek Divide	12/29	25	5.6	12.0	7.3 <sup>h</sup>
Caliban	c				
Champion	12/31	38	9.7	17.1	7.7 <sup>h</sup>
Cold Springs Camp	c				
Deadwood Junction	12/31	12	1.5	9.2	3.3 <sup>h</sup>
Diamond-Crater Summit	12/29	41	10.7	12.8	14.0 <sup>h</sup>
Diamond Lake	12/29	28	5.4	7.6	8.2 <sup>h</sup>
Fish Lake	12/30	17	2.8	10.6	5.3 <sup>m</sup>
Fourmile Lake	12/29	34	9.4	--	8.7 <sup>h</sup>
Grayback Peak	c				
Howard Prairie	12/31	9	2.1	8.5	3.2 <sup>h</sup>
Hyatt Prairie Reservoir	12/31	10	1.2	8.3	3.1 <sup>h</sup>
King Mountain #1	12/30	20	4.1	7.3	--
King Mountain #2	12/30	15	2.5	4.3	--
King Mountain #3	12/30	5	1.0	3.8	--
King Mountain #4	12/30	T	T	T	--
King Mountain #5	12/30	0	0.0	T	--
King Mountain #6	12/30	0	0.0	0.0	--
Little Red Mountain	c				
Mt. Ashland Switchback	c				
North Umpqua	12/29	19	3.3	7.6	6.1 <sup>h</sup>
Page Mountain	c				
Park Headquarters	12/30	74	21.2	29.3	21.6
Red Butte #1	12/28	25	3.8	7.8	4.3 <sup>h</sup>
Red Butte #2	12/28	20	3.6	3.3	0.6 <sup>h</sup>
Red Butte #3	12/28	14	1.7	1.8	--
Red Butte #4	12/28	10	0.8	1.3	--
Red Butte #5	12/28	7	1.2	0.9	2.2 <sup>m</sup>
Red Butte #6	12/28	T	T	T	--
Seven Lakes #1 (DISCONTINUED)					
Seven Lakes #2	c				
Seven Mile (New Course)	c				
Silver Burn	1/2	15	3.1	10.5	4.4
Siskiyou Summit	12/30	11	2.2	8.8	2.4 <sup>h</sup>
Siskiyou Summit (Alternate #2 - New Course)	12/30	10	2.1	--	--
Ski Bowl Road	c				
South Fork Canal	1/2	6	1.7	3.9	1.3
Trap Creek	12/30	13	2.1	6.1	4.1 <sup>h</sup>
Whaleback	c				
Windigo Pass (DISCONTINUED)					

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.

### KLAMATH WATERSHEDS

Annie Spring	12/30	55	15.6	22.4	14.9
Betty (PP&L)	12/31	3	0.4	1.5	0.2 <sup>m</sup>
Billie Creek Divide	12/29	25	5.6	12.0	7.3 <sup>h</sup>
Bly Mountain	12/22	0	0.0	2.6	2.7 <sup>h</sup>
Bly 101 Ranch (PP&L)	12/31	6	0.7	--	0.7
Chemult	1/6	11	2.2	4.9	4.1
Chiloquin (PP&L)	12/31	4	0.6	--	0.7
Cold Springs Camp	c				
Cold Springs Camp Pillow	1/1			5.9	
Crazyman Flat	c				
Crowder Flat (Calif.)	c				
Crystal (PP&L)	12/31	6	1.1	7.9	3.5 <sup>h</sup>
Diamond-Crater Summit	12/29	41	10.7	12.8	14.0 <sup>h</sup>
Diamond Lake Junction (97)	12/29	10	1.4	3.5	2.0
Dog Hollow	c				
Finley Corrals	c				
Fort Klamath (PP&L)	12/29	5	0.6	4.1	1.3 <sup>h</sup>
Fourmile Lake	12/29	34	9.4	--	8.7 <sup>h</sup>
Gerber	1/1	4	1.5	2.8	1.1 <sup>h</sup>
Harriman (PP&L)	12/31	8	1.2	1.8	1.3 <sup>h</sup>
Hyatt Prairie Reservoir	12/31	10	1.2	8.3	3.1 <sup>h</sup>
Kirk (PP&L)	12/30	12	2.6	4.5	2.8 <sup>m</sup>
Lake of the Woods	12/29	10	1.4	7.5	5.1 <sup>h</sup>
Park Headquarters	12/30	74	21.2	29.3	21.6
Pelican Guard Station	12/22	0	0.0	3.8	1.4 <sup>h</sup>
Quartz Mountain	12/30	9	1.5	4.0	2.4
Quartz Mtn. (Extension)	12/30	9	2.0	4.0	--
Quartz Mountain (PP&L)	12/30	12	2.6	4.9	2.4 <sup>m</sup>
Seven Lakes #1 (DISCONTINUED)					
Seven Lakes #2	c				
Seven Mile (NEW COURSE)	c				
State Line (Calif.)	c				
Strawberry	c				
Summer Rim					
Sun Mountain	12/30	27	5.8	12.1	8.5
Sycan Flat	c				
Taylor Butte	12/23	9	0.9	2.7	2.0 <sup>h</sup>
Yamsey (PP&L - DISCONTINUED)					

### LAKE COUNTY, GOOSE LAKE WATERSHEDS

Adin Mountain (Calif.)	c				
Bald Mountain (Nev.)	c				
Bear Flat Meadow	c				
Camas Creek	12/30	13	2.1	5.0	3.4 <sup>m</sup>
Cedar Pass (Calif.)	c				
Colvin Creek	c				
Cox Flat	c				
Crane Mountain	c				
Crowder Flat (Calif.)	c				
Dismal Swamp (Calif.)	c				
Finley Corrals	c				
Hart Mountain	c				
Little Bally Mountain (Nev.)	c				
Patton Meadows					
Quartz Mountain (PP&L)	12/30	12	2.6	4.9	2.4 <sup>m</sup>
Quartz Mountain	12/30	9	1.5	4.0	2.4
Quartz Mountain (Ext.)	12/30	9	2.0	4.0	--
Sherman Valley	c				
Silver Creek	12/31	5	0.9	1.8	1.4 <sup>h</sup>
State Line (Calif.)	c				
Strawberry	c				
Summer Rim	c				
Sycan Flat	c				

# BASIC DATA SUPPLEMENT 1

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.

### HARNEY BASIN WATERSHEDS

Blue Mountain Springs	12/29	27	5.8	7.2	5.6 <sup>h</sup>
Buck Pasture	c				
Buckskin Lake	c				
Call Meadows	c				
Crow Camp	c				
Delintment Lake	c				
Denio Creek	c				
Disaster Peak (Nev.)	c				
Emigrant Butte	c				
Fish Creek	c				
Hart Mountain	c				
Idlewild Camp	12/29	9	1.3	1.8	1.4
Izee Summit	12/30	12	2.6	4.1	2.5 <sup>h</sup>
Lake Creek R. S.	12/29	19	3.7	5.0	3.7 <sup>h</sup>
Lake Creek (New Tangent)	12/29	18	3.9	4.9	--
Oregon Canyon	c				
Rock Spring	12/29	12	2.1	2.3	1.5
Silvies	c				
Snow Mountain	c				
Starr Ridge	12/29	11	2.3	3.0	2.0 <sup>h</sup>
Stinking Water	12/30	5	1.1	2.5	1.3 <sup>h</sup>
Trout Creek	c				
"V" Lake	c				

## SNOW

DRAINAGE BASIN and/or SNOW COURSE	THIS YEAR			PAST REC.	
	Date of Survey	Snow Depth (In.)	Water Cont. (In.)	Water Content (inches)	Last Yr.

# BASIC DATA SUPPLEMENT 2

## SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average *
OWYHEE, MALHEUR WATERSHEDS							
Bear Creek (Nev.)	7800	72	16.8				
Big Bend (Nev.)	6700	48	16.7	12/29	11.7	16.0	15.4
Blue Mountain Springs	5900	42	16.9	12/28	6.6	9.9	9.1
Crane Prairie	5375	48	18.2				
Folly Farm	4450	30	12.5				
Jack Creek, Lower (Nev.)	6800	48	8.6				
Jordan Valley	4390	48	19.3	No Report		14.3	14.6
Mud Flat (Ida.)	5500	48	12.8				
Rodeo Flat (Nev.)	6800	42	11.0	12/30	4.3	10.7	10.3
Stinking Water Summit (DISCONTINUED)							
Taylor Canyon (Nev.)	6200	48	15.1	12/30	9.2	12.4	13.2
Triangle (Ida.)	5150	48	16.6				
BURNT, POWDER, PINE, GRANDE RONDE, IMNAHA WATERSHEDS							
Blue Mountain Summit	5100	36	16.8	12/30	9.0	--	9.2
Dooley Mountain	5430	36	9.2	12/31	2.5	2.5	3.7
Emigrant Springs	3925	48	22.3	12/23	21.2	19.5	17.2
Ladd Summit	3730	48	18.9	12/30	10.1	9.7	9.8
Moss Springs	5850	36	25.8	12/31	14.0	14.6	--
Tollgate	5070	48	23.6	12/30	14.9	18.1	19.7
UMATILLA, WALLA WALLA, WILLOW, ROCK, LOWER JOHN DAY WATERSHEDS							
Athena-Weston (DISCONTINUED)							
Battle Mountain Summit	4340	48	13.8	12/23	12.4	12.9	11.5
Emigrant Springs	3925	48	22.3	12/23	21.2	19.5	17.2
Tollgate	5070	48	23.6	12/30	14.9	18.1	19.7
UPPER JOHN DAY WATERSHEDS							
Battle Mountain Summit	4340	48	13.8	12/23	12.4	12.9	11.5
Beech Creek	4800	48	21.3	12/30	8.8	10.1	10.9
Blue Mountain Springs	5900	42	16.9	12/28	6.6	9.9	9.1
Blue Mountain Summit	5100	36	16.8	12/30	9.0	--	9.2
Derr	5670	24	9.0				
Marks Creek	4540	36	14.1	12/24	9.8	11.0	10.2
Snow Mountain	6300	48	16.7				
Starr Ridge	5150	36	10.6	12/29	7.8	10.6	8.8
Williams Ranch	4500	42	17.9	12/30	16.6	17.7	16.3
UPPER DESCHUTES, CROOKED WATERSHEDS							
Derr	5670	24	9.0				
Marks Creek	4540	36	14.1	12/29	9.8	11.0	10.2
Snow Mountain	6300	48	16.7				
HOOD, MILE CREEKS, LOWER DESCHUTES WATERSHEDS							
Cooper Spur	3490	72	26.4	1/2	14.2	14.0	--
KLAMATH WATERSHEDS							
Bly Mountain	5090	42	14.0	12/22	9.7	9.1	10.4
LAKE COUNTY, GOOSE LAKE WATERSHEDS							
Camas Creek	5720	42	14.5	12/31	11.5	12.2	11.9
Quartz Mountain	5320	48	15.3	12/30	7.4	7.4	8.9

# BASIC DATA SUPPLEMENT 2

## SOIL MOISTURE

DRAINAGE BASIN and/or STATION		Profile (Inches)		Date of Survey	Soil Moisture (Inches)		
Name	Elevation	Depth	Capacity		This Year	Last Year	Average *
HARNEY BASIN WATERSHEDS							
Blue Mountain Springs	5900	42	16.9	12/28	6.6	9.9	9.1
Fish Creek	7900	48	15.0				
Folly Farm	4450	30	12.5				
Silvies	6900	48	16.4				
Snow Mountain	6300	48	16.7				
Starr Ridge	5150	36	10.6	12/29	7.8	10.6	8.8
Stinking Water (DISCONTINUED)							
Willow-Bald	5000	24	6.6	12/30	4.3	6.0	4.7

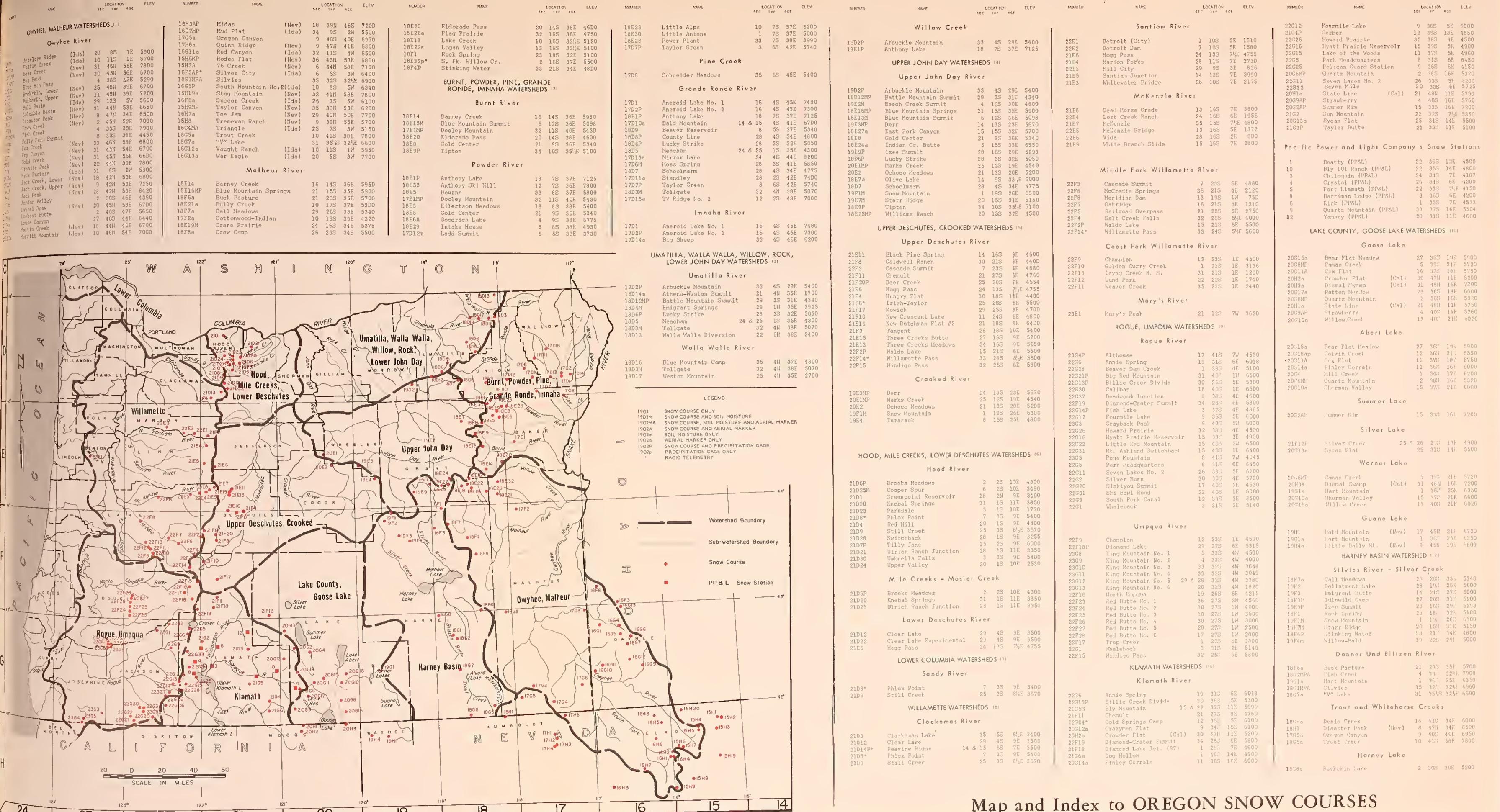
\*Average for years of record--for stations with as much as 6 years of record or more.

# BASIC DATA SUPPLEMENT 3

## PRECIPITATION (Inches)

DRAINAGE BASIN and PRECIPITATION GAGE LOCATION	ELEVATION	CURRENT INFORMATION		PAST RECORD	
		Date of Reading	Precipitation	Last Year	Average *
Anthony Lake (Baker County)	7150	11/25 to 12/29	6.07		
Camas Creek (Lake County)	5825	11/26 to 12/30	5.95		
County Line (Umatilla County)	4800	12/5 to 12/30	2.10		
Dooley Mountain (Baker County)	5200	11/19 to 12/18	1.25		
Granite Mountain (Grant County)	5900	11/17 to 12/16	2.30		
Marks Creek (Crook County)	4540	11/25 to 12/24	3.85		
Quartz Mountain Summit (Lake County)	5530	11/26 to 12/30	6.37		
Taylor Butte (Klamath County)	5040	10/4 to 12/23	8.21		







## The Following Organizations Cooperate in the Oregon Snow Survey Work

### STATE

Idaho Cooperative Snow Surveys  
Nevada Cooperative Snow Surveys  
Oregon State University  
Oregon State Engineer and Corps of State Watermasters  
Oregon State Highway Engineers  
Soil and Water Conservation Districts of Oregon

### COUNTY

Douglas County Water Resources Survey

### FEDERAL

Department of Agriculture  
Cooperative Extension Service  
Forest Service  
Soil Conservation Service  
Department of Commerce  
Weather Bureau  
Department of the Interior  
Bonneville Power Administration  
Bureau of Land Management  
Bureau of Reclamation  
Fish and Wildlife Service  
Geological Survey  
National Park Service  
Department of National Defense  
Corps of Army Engineers

### PUBLIC UTILITIES

Pacific Power and Light Company  
Portland General Electric Company  
California-Pacific Utilities Company

### MUNICIPALITIES

City of Baker  
City of La Grande  
City of The Dalles  
City of Walla Walla

### IRRIGATION DISTRICTS

Arnold Irrigation District  
Associated Ditch Companies  
Burnt River Irrigation District  
Central Oregon Irrigation District  
East Fork Irrigation District  
Grants Pass Irrigation District  
Hood River Irrigation District  
Jordan Valley Irrigation District  
Juniper Flat Irrigation District  
Lakeview Water Users, Incorporated  
Medford Irrigation District  
Middle Fork Irrigation District  
North Board of Control - Owyhee Project  
North Unit Irrigation District  
Ochoco Irrigation District  
Rogue River Valley Irrigation District  
South Board of Control - Owyhee Project  
Squaw Creek Irrigation District  
Talent Irrigation District  
Tumalo Project  
Vale-Oregon Irrigation District  
Warmsprings Irrigation District

### PRIVATE ORGANIZATIONS

The Crag Rats, Hood River, Oregon

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